

Patient Advice and Liaison Service (PALS)

Please contact us if you need general information or advice about Trust services. www.bartshealth.nhs.uk/pals

Large print and other languages

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Barts Health
NHS Trust

Patient information

Healthy eating for diabetes and pregnancy

Nutrition and Dietetics Department

Name:

Date:

Dietitian:

Contact Number:

Hospital site:



What causes diabetes in pregnancy?

- Diabetes is a condition where the body is not making enough insulin or the body is less responsive to insulin. Insulin is a hormone that helps to keep **blood glucose (often called blood sugar)** at normal levels.
- When your body cannot make enough insulin your blood glucose levels can rise. As your baby develops and grows, the amount of insulin your body needs increases.
- If your blood glucose levels stay high this may cause problems for you and your baby.
- Following the Diabetes and Pregnancy Healthy Diet and lifestyle advice can help keep your blood glucose within the normal range.
- This diet sheet is designed for people who have pre-existing diabetes and those who develop diabetes during pregnancy. Diabetes developed in pregnancy is called gestational diabetes.
- Gestational diabetes is a type of diabetes which affects pregnant women, usually in their second or third trimester. This generally goes away after giving birth. However, there is an increased risk of developing type 2 diabetes later in life. Maintaining a healthy lifestyle is therefore important to reduce this risk.

Vitamins and minerals in pregnancy

- **Folic Acid** is important during pregnancy to reduce the risk of neural tube defects. Women with pre-existing diabetes and gestational diabetes should take a **5mg folic acid** supplement every day before conception and for the first 12 weeks of pregnancy.
- **Vitamin D** helps to absorb calcium which we need for healthy bones and teeth, and also maintains a healthy immune system. All pregnant and breastfeeding women should take a supplement of **10µg Vitamin D or 400 IU's or prenatal vitamins** containing **10µg/d** to maintain adequate vitamin D stores during pregnancy and breastfeeding. Examples include **Healthy Start Vitamins** or **Pregnacare** (both contain 10µg/d vitamin D)
- **Iron** has many important roles in the body. Not getting enough iron can make you tired and lead to anaemia. Red meat, sardines, kidney and eggs are good sources of iron. Dark green leafy vegetables, beans, lentils, nuts such as almonds or pistachio, and dried fruit also contain iron.
- **Calcium** is important for healthy bones and teeth. Dairy products and fish with edible bones, such as sardines, are the best sources of calcium in the diet. Alternative sources of calcium include calcium-enriched milk alternatives, such as unsweetened soya/nut/oat milk.

If you are concerned about your intake of these vitamins and minerals, speak to your doctor.

Foods to avoid in pregnancy

Some foods need to be avoided during pregnancy due to the risk of harm to yourself and your baby. You should avoid:

Mould ripened and blue veined cheeses	For example Brie, Camembert, Stilton and Danish Blue.
Liver and liver products	All foods containing liver including liver pate and liver sausage.
Pate or terrine	Including meat, fish, and vegetarian pate or terrine.
Raw or undercooked meat	Make sure it is not pink and there is no trace of blood.
Raw or partially cooked eggs	Make sure the yolk and white are solid and avoid any dishes containing raw egg.
Unpasteurised milk or cheese	Including cheeses made with unpasteurised milk from cow, sheep or goats sources.
Raw shellfish and some types of fish	Avoid shark, swordfish and marlin completely.
Limit intake of oily fish	Eat no more than 2 portions per week of oily fish such as, mackerel, pilchards or salmon. These fish contain high levels of mercury. Limit your intake of tuna to 2 steaks or 4 medium size cans a week.

Note: you can eat peanuts during pregnancy unless you have a nut allergy

Preparing foods

- Wash your hands before preparing food and wash your hands, surfaces and utensils after preparing raw meat.
- Wash fruit, vegetables and salads to remove all traces of soil.
- Keep leftovers covered in the fridge and use within two days.
- Heat ready meals and leftovers until they are piping hot.
- Check the 'use by' and 'best before' dates on foods and store as advised on the label.

An introduction to carbohydrates

Which foods and drinks affect blood glucose levels?

All **carbohydrates** affect your blood glucose levels. When you eat these foods, your body digests and breaks them down into glucose that is then released into your bloodstream to be used for energy. Carbohydrates are present in a number of foods and drinks:

- **Starchy foods** such as rice, pasta, noodles, bread, oats, breakfast cereals, starchy vegetables such as potatoes, yam, cassava or plantain, and all food made with flour or grains such as chapattis, rotis and parathas.
- **Sugar or foods and drinks containing sugar** such as sweets, cakes, chocolates, biscuits, fizzy drinks, ice-cream and desserts.
- **Fruit** contains a natural sugar called fructose.
- **Milk & Dairy foods** contain a natural sugar called lactose.

It is important to eat a variety of food groups to make sure you and your baby are getting the vitamins, minerals and nutrients you both need.

The Eatwell Guide, on page 4, shows the proportions of each food group the general population needs for a balanced diet. Your carbohydrate intake may need to be altered during your pregnancy to manage your blood glucose levels as too much carbohydrate can lead to high blood glucose levels.

It is not safe to over-restrict carbohydrate intake in pregnancy as this can cause problems to your baby. Your dietitian can assist you with your portion sizes. If your blood glucose levels rise whilst you are eating the recommended amount of carbohydrates, this is a sign that you need some extra treatment to help your diabetes.

Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

Check the label on packaged foods

Each serving (150g) contains

Energy	306kJ	73kcal	13%
Carbohydrate	57g	113g	10%
Fat	1.3g	29g	4%
Saturated fat	0.9g	20g	2%
Salt	0.9g	18g	15%

Typical values (as sold) per 100g: 697kJ / 167kcal of an adult's reference intake

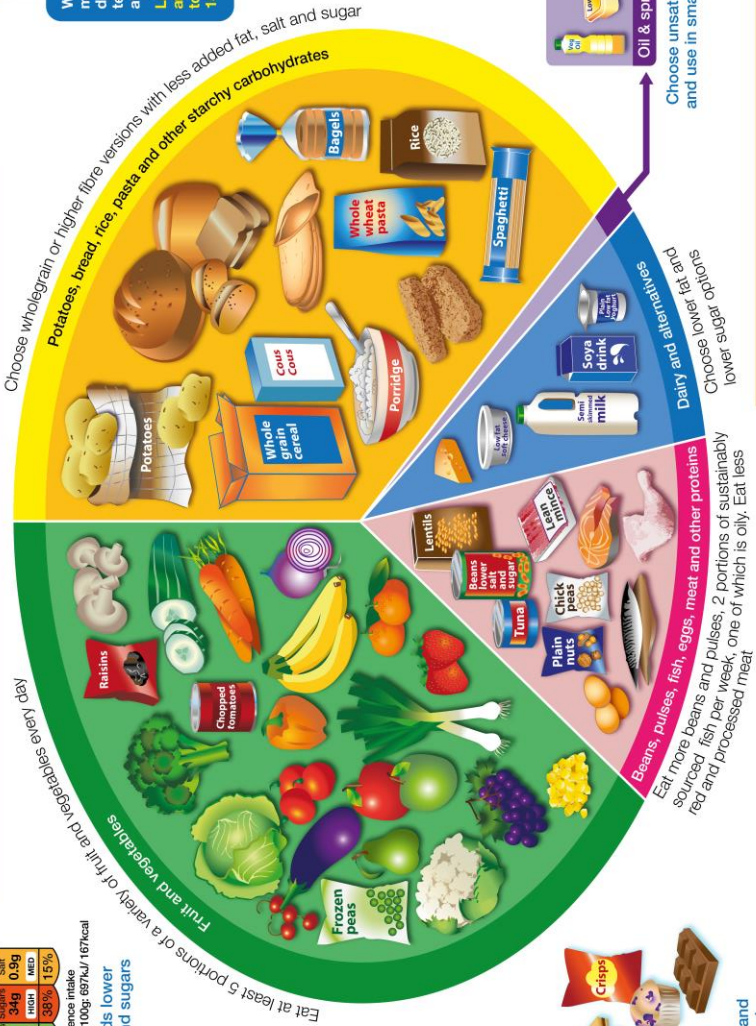
Choose foods lower in fat, salt and sugars

Choose wholegrain or higher fibre versions with less added fat, salt and sugar

6-8 a day

Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.



Eat less often and in small amounts

Per day 2000kcal 2500kcal

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

Source: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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Weight gain in pregnancy

The amount of weight a woman will gain during pregnancy can vary. Only some weight gain is due to increased body fat. The baby, placenta, amniotic fluid, and increases in maternal blood and fluid volume all contribute.

The amount of safe weight gain in pregnancy varies according to your body mass index at the start of your pregnancy. Your doctors and midwives will advise you on safe weight targets in pregnancy.

Physical activity and exercise

Physical activity can be helpful in managing blood glucose levels and keeping your diabetes under control.

Regular physical activity increases the amount of glucose used by your muscles for energy, so it usually lowers blood glucose levels. It can also help reduce the amount of insulin you need by helping your body use insulin more efficiently.

The general advice for adults is to do 150 minutes of moderate-intensity physical activity each week. For example, going for a 20 – 30 minute walk every day can help to lower your blood glucose levels. If you were regularly active before your pregnancy, continue your pre-pregnancy activity but please discuss this with your midwife.

Foods to avoid

- Foods and drinks high in fat and sugar offer little nutritional value and can lead to excess weight gain.
- Foods high in sugar may cause your blood glucose to rise quickly.
- Try to limit salt in your food, as taking too much salt can increase your blood pressure.

Ways to limit added sugars

- Avoid adding sugar or honey to food and drinks such as tea and coffee.
- If you do not like drinks without sugar, try an artificial sweetener such as **Canderel™** or **Splenda™**, or a plant-based sweetener such as **Stevia**. When used in small amounts, they have no significant effect on your blood glucose levels.
- Avoid ordinary squash and fizzy drinks – use ‘diet’ or ‘no added sugar’ varieties or choose water or low fat milk instead.
- Avoid chocolate, sweets, and sweet desserts.
- Have plain biscuits (e.g. digestive or rich tea) or savoury crackers instead of chocolate or cream varieties.

Ways to limit foods high in fat

- Spread butter and margarine thinly
- Avoid deep fried foods, crisps, pastries
- Remove fat or skin on meat and chicken
- Limit the fat or oil used in cooking

Drinks high in caffeine

High caffeine consumption has been linked to low birth weight babies. Try to have less than 200mg caffeine per day.

Caffeine content of common drinks:

- 1 cup of tea - 75mg
- 250ml can energy drink - 80mg
- 330ml can of cola - 40mg
- 50g bar plain chocolate - 50mg
- 1 mug of filter coffee - 140mg
- 1 mug of instant coffee - 100mg

Meals and snacks

- Eat three regular meals per day, with snacks if hungry. Each meal should be spread throughout the day and should contain a similar amount of starchy foods.
- Eat plenty of vegetables.
- Fruits will affect your blood glucose levels but also provide a variety of vitamins, minerals, and fibre that are important for you and your baby’s health. It is therefore important to include fruit in your diet. To limit fruit’s affect on your blood glucose, spread your fruit intake across the day and have only one portion of fruit at a time.

Snack ideas

Snacks can be taken if you are hungry. They can be taken **2 hours** after meals, up to **3 times a day** between meals.

<i>Snacks that <u>will</u> affect blood glucose</i>	<i>Snacks that <u>will not</u> affect blood glucose</i>
<ul style="list-style-type: none">• One piece of fruit• One digestive biscuit• Two rich tea biscuits/ crackers/oatcakes• One slice of bread/ toast with two teaspoons natural peanut butter/Marmite™/low fat cheese• One small pot of low fat natural or ‘diet’ yoghurt• One handful of cherry tomatoes• 20g non-sweet popcorn• 30g Bombay mix• One glass of milk• One medium pakora/samosa• One small (3 - 4inches) corn on the cob	<ul style="list-style-type: none">• Vegetable sticks, e.g. carrots, cucumber, peppers• Avocado• Houmous• Cream cheese• One hard boiled egg• One small handful of nuts/seeds• One or two thin slices of cheese, preferably low fat• 100g cottage cheese• Olives• Gherkins• Cooked meat, e.g. chicken pieces• Sugar-free jelly

Portion Sizes for Each Food Group

Starchy foods

6 portions per day

Examples of 1 portion:

1 slice of bread – granary/wholemeal/rye
1 small bread roll or bun
1 tea plate size chapatti
½ pitta bread
2-3 tablespoons rice (basmati/easy cook/brown), pasta, couscous, noodles or mashed potato
2 new potatoes or half a baked potato
½ inch slice of yam or cassava
⅓ of a large plantain or green banana
1 egg size piece of Fufu or maize-meal
2-3 crispbreads or crackers
3 tablespoons of breakfast cereal
1 Weetabix™ or Shredded Wheat™
½ sachet of instant oats or 3 tablespoons of uncooked oats
1 corn on the cob / 3 tablespoons tinned corn kernels

Breakfast cereals

Best Cereal Choices:

Weetabix™, Cheerios™ (plain), Shredded Wheat™, Plain Porridge (non –sweet), All Bran™, Bran Flakes™

Cereals to Avoid:

Rice Krispies™, Cornflakes™, Frosties™, Crunchy Nut™, Coco Pops™, Honey Loops™ or any sugar or honey coated cereals

Vegetables

3 or more portions a day

Examples of 1 portion:

All non-starchy vegetables, for example:

Cereal bowl of salad – lettuce, tomato, cucumber, radishes
3 heaped tablespoons of cooked vegetables, e.g. sprouts, carrots, spinach, broccoli, pumpkin, cabbage
2 broccoli/cauliflower spears

Fruit

2-3 portions per day*

Examples of 1 portion:

*Only eat one portion of fruit at a time and spread portions out across the day

1 medium apple, pear or orange
2 small plums, apricots, or kiwis
1 small or half a large banana
Half a mango or grapefruit
5cm slice of melon
1 slice of pineapple
1 heaped tablespoon dried fruit
1 handful of strawberries, cherries or grapes
Limit fruit juice to maximum of 125ml per day

Protein rich foods

2 portions per day

Examples of 1 portion:

2 - 3 slices cooked meat (60-85g)
1 medium fillet white fish (120-140g)
1 small fillet oily fish (120g)
3 tablespoons of dhal, beans or lentils
2 eggs
4 tablespoons of soya/tofu/vegetable based meat alternative
1 tablespoon of nuts

Milk and dairy products

2 - 3 portions per day

Examples of 1 portion:

1 glass (200ml) milk – semi skimmed or skimmed cows milk/ calcium fortified soya, almond, or rice milk
1 small pot low fat natural or 'diet' yoghurt (120 – 150g)
2 thin slices / 1 small matchbox size piece low fat cheese (40 – 45g)
2 tablespoons of cottage cheese