***Your important health information (for Indian women)***

Healthy eating for gestational diabetes

# What is gestational diabetes?

Gestational diabetes occurs in pregnancy due to changes in your hormone levels. Diabetes makes the level of glucose (a type of sugar) in the blood too high. A higher than normal level of glucose in the blood while you are pregnant can cause problems for the baby, such as growing too large, early birth, distress during birth and/or low blood glucose after birth.

# Why is your diet important in gestational diabetes?

Following a healthy eating plan will help you to:

* provide adequate nutrition for you and your baby
* manage your blood glucose levels
* manage weight gain during your pregnancy.

# Adequate nutrition for you and your baby

It is important to eat a variety of healthy foods to meet you and your baby’s nutritional needs. The recommendations for women with gestational diabetes are similar to those for all pregnant women, with some additional guidelines.

## Include the following foods in your diet each day

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| Food groups | Serves each day | Examples of one serve |
| Fruit | 2 | 1 medium apple, orange or only occasionally:  1 cup diced/canned fruit 1 ½ tablespoons sultanas  2 small apricots , plums ½ cup fruit juice |
| Vegetables | 5 | ½ cup cooked or 1 cup raw/salad vegetables |
| Wholegrain breads and cereals | 8 ½ | 1 slice bread/roti/chappati ½ cup cooked porridge  ½ medium roll ⅔ cup cereal flakes  ¼ cup muesli ½ cup cooked rice, pasta, noodles, quinoa, barley |
| Milk, yoghurt, cheese and alternatives | 2 ½ | 1 cup milk  2 slices cheese 200g yoghurt |
| Lean meat or alternatives | 3 ½ | 65g cooked meat 170g tofu  80g cooked chicken 30g nuts/seeds  100g cooked fish 1 cup cooked legumes/beans  2 large eggs such as lentils and chickpeas |

**Limit (eat in small amounts)**

* High mercury fish to one serve in two weeks (shark, flake, swordfish, marlin) with no other fish that fortnight. Limit moderate mercury fish to one serve per week (orange roughy, catfish) with no other fish that week. Any other fish or seafood can be eaten two to three times each week.
* Caffeine to 200mg/day (café coffee has 90 to 120mg/cup, tea has 10 to 50mg/cup). Coffee and tea should be avoided in the two hour period before testing blood glucose levels.
* Foods that are high in saturated fat, added sugars and added salt.

## Avoid (do not eat)

* Alcohol and high risk listeria and salmonella (bacteria) foods such pre-prepared salads, cold/deli meats, raw eggs and soft white cheeses such as cold paneer, cottage and feta cheese.

# Managing your blood glucose levels

The following recommendations are guidelines to help manage your blood glucose levels. There are two key factors to consider when managing your diabetes with diet:

1. Type of carbohydrate
2. Amount of carbohydrate **What are carbohydrates?** Carbohydrates are:
   * starches and sugars found in foods.
   * broken down to glucose during digestion.
   * found in many healthy foods and provide the body with fuel (energy), fibre, vitamins and minerals. It is important to include these foods in your diet.

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| **Food group** | **High carbohydrate** | **Low carbohydrate** |
| **Wholegrain breads and cereals** | Bread, roti, chappati, pasta, rice, noodles, breakfast cereals, other grains such as bulghur, couscous, semolina |  |
| **Fruit** | All fruit including dried fruit and juices | Avocado |
| **Vegetables** | Potato, sweet potato, pumpkin, corn, legumes and lentils | All other cooked and salad vegetables |
| **Milk, yoghurt, cheese and alternatives** | Dairy, soy, oat milks  Yoghurt | Cheese, paneer  Unsweetened almond milk |
| **Lean meats or alternatives** | Legumes and lentils | Meat, chicken, fish, eggs, tofu, nuts and seeds |

Herbs and spices such as garlic, cumin, paprika, coriander, cinnamon, chilli, mustard seeds, cloves, coriander and pepper do not contain carbohydrate and can still be used to flavour food.

The high carbohydrate foods above will directly affect your blood glucose levels. The type and amount of these foods needs to be monitored.

The foods which are low in carbohydrate will not significantly affect your blood glucose levels.

## Sugar

Carbohydrate foods that don’t contain much nutrition include table sugar (white and raw), jaggery, soft drinks, honey, lollies, cakes, sweet biscuits, chocolate, deep fried foods (such as samosa, pakora, bonda, chips) and Indian sweets and desserts. It is best to limit these foods.

Small amounts of sugar, such as one teaspoon in a hot drink, should not increase blood glucose levels much.

# Artificial sweeteners

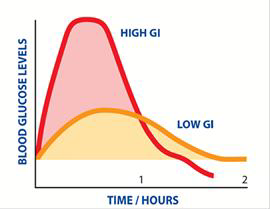
Artificial sweeteners contain either little or no carbohydrate. Sweeteners include Aspartame (Equal) (951), Sucralose (Splenda) (955) and Stevia (960) and are also found in artificially sweetened products such as diet soft drinks. They can be used in small amounts instead of sugar and are safe to have during pregnancy.

# What type of carbohydrate foods should I eat?

The Glycaemic Index is a measure of how quickly or slowly a carbohydrate food digests and increases blood glucose levels.

A lower GI carbohydrate food will affect your blood glucose level more slowly A higher GI carbohydrate food will affect your blood glucose level more quickly

The graph below shows how a high and low GI food affects your blood sugar level over a two hour period



Lower GI carbohydrates are the preferred choice for managing your diabetes and can help to avoid the need to use insulin.

Use the table on the next page to find low GI options. If you are frequently eating foods in the higher GI column, you can make a swap to an option in the low GI column.

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| **Carbohydrate food** | * **Foods that raise blood glucose levels least (lower GI)** | ý **Foods that raise blood glucose levels most (higher GI)** |
| **Bread and flours** | * Wholegrain bread slices, wraps and chapatti * Flatbread/naan/roti made with whole- wheat/grain flour and atta mix * Low GI white bread * Besan (Bengal gram) flour, bajra flour, kuttu flour, jau flour * Fruit and grain bread * Sourdough, sourdough rye | x White/wholemeal bread slices, flatbread  x White/wholemeal flatbreads/naan/roti  x Fried bread (Dal Puri) x White Lebanese bread x Turkish bread  x White flour |
| **Cereals** | * Untoasted muesli * Rolled oats (porridge) * Hi-Bran Weet-Bix * All- Bran, Guardian, Special K * Up & Go | x Puffed rice, rice flakes and rice porridge  x Instant oats (porridge)  x Corn flakes  x Puffed wheat  x Coco Pops, Rice Bubbles  x Froot Loops |
| **Rice, pasta and grains** | * Long grain rice and Mahatma long grain rice * Basmati (brown and white) * Doongara clever rice, wild rice, red rice * Wheat pasta (white and wholemeal) * Bulgur or cracked wheat * Semolina, pearl couscous, barley * All noodles | x Jasmine rice  x White/brown short grain rice  x Polenta  x Couscous  x Millet |
| **Starchy vegetables and legumes** | * Legumes such as lentils, red bean/kidney beans, chickpeas, mung beans, broad beans, dahl * Orange sweet potato, Nicola potato * Carisma and baby Carisma potato * Butternut pumpkin * Corn * Yam, cassava and taro | x White potato  x Purple sweet potato  x Pumpkin (varieties other than butternut) |
| **Fruit** | * Strawberries and other berries * Apples, pear, bananas * Orange, mandarin, kiwifruit, grapes * Nectarines, peaches, apricot, plums, mango * Passionfruit, guava, grapefruit * Dates * Tinned fruit in natural juice (not syrup) | x Rockmelon, watermelon  x Tinned fruit in syrup  Note: Consume only small amounts of dried fruit, fruit juice and fruit puree bars.  Fresh fruit is preferable. |
| **Milk and yoghurt** | * Milk and yoghurt * Soy milk and yoghurt * Buttermilk   Note: choose mostly low fat varieties | x Sweetened condensed milk  x Oat milk  x Rice milk |
| **Biscuits, crackers** | * Wholegrain crackers such as Vita-Weat, 9 Grain, Ryvita Multigrain * Arnott’s Snack Right biscuits fruit slice/pillow | x Cakes  x White savoury crackers such as Savoy  x Rice crackers and rice cakes x Sweet biscuits such as Marie x Indian rusk biscuits |
| **Extras** | * Low fat ice cream and custard (limit) * Milo (made with low fat milk) | x Indian sweets and desserts, such as Gulab Jamun Jalebi, kheer (rice pudding)  x Fried pastries such as samosa |

# What amount of carbohydrates should I eat?

You should eat carbohydrates at each meal and snack. You should eat three moderately sized meals and three small snacks each day.

The amount of carbohydrates recommended below is needed to meet your daily requirements in pregnancy. The amount of carbohydrate in food is counted in carbohydrate portions. Only high carbohydrate foods are counted in portions.

## Aim to eat three portions of carbohydrate (45g) at each main meal and one to two portions of carbohydrate (15-30g) at each snack.

Using a metric measuring cup (250ml) to serve your carbohydrate foods can help you count your carbohydrate portions correctly.

For example 1 cup cooked rice/pasta = 3 carbohydrate portions.

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| **Carbohydrate food** | **One portion (15g carbohydrate)** | |
| **Breads and** | 1 slice bread | 1 small (30g or 15cm diameter) chapatti |
| **flours** | ½ bread roll  1 small dinner roll  ⅓ large flatbread | ⅔ (30g) naan bread  1 small (30g or 15cm diameter) plain dosa/idli |
|  | 1 small (30g or 15cm diameter) flatbread | 1½ besan cheela (15cm diameter) |
|  | ⅓ cup uppuma |  |
|  | ⅓ cup poha |  |
| **Cereals** | 2 tablespoons (¼ cup) rolled oats and muesli  ½ cup cooked porridge | 1½ Weet-Bix  ½ cup breakfast cereal |
| **Rice, pasta and grains** | ⅓ cup cooked rice  ⅓ cup cooked bulgur/cracked wheat  ½ cup cooked noodles | ⅓ cup cooked white pasta  ⅓ cooked semolina/couscous |
| **Starchy vegetables and legumes** | 1 small potato  ¾ cup canned/cooked lentils  ½ cup canned/cooked legumes:  (red beans/kidney beans, chickpeas)  ½ cup cooked sweet potato/taro/yam | ½ cup corn kernels 1 small corn cob  1 cup cooked pumpkin |
| **Fruit** | 1 medium apple, orange, pear, peach | 1 whole grapefruit, pomegranate |
|  | 4 dates | 25 small strawberries |
|  | ½ large banana | 8 extra-large strawberries |
|  | 1 small banana | 2 medium nectarines, plums |
|  | ½ cup grapes | ½ cup tinned fruit |
|  | 1½ cups melon, pineapple | 1 tablespoon sultanas |
|  | 1 cup berries, cherries | 6 dried apricots, prunes |
|  | ½ cup fruit juice | 2 small mandarins, kiwi |
|  | 3 large apricots | ½ mango |
| **Milk and** | 100g fruit yoghurt | 1 cup (250ml) milk (all types) |
| **yoghurt** | 200g yoghurt, plain |  |
|  | (always check yoghurt labels |  |
|  | as the carbohydrate content may vary) |  |
| **Other dairy** | 2 small scoops low fat ice cream | ⅓ cup low fat custard |
| **Biscuits, crackers and extras** | 2 Ryvita  4 Vita-Weats  1 small muesli bar | 2 Arnott’s Snack Right biscuits  3 cups air popped popcorn 2 Indian rusk biscuits |
| **Flour** | 2 tablespoons white/wholemeal flour  ⅓ cup besan (Bengal gram) flour | ⅓ cup atta flour |

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| **Sample meal plans** | | |
|  | **Option 1** | **Option 2** |
| **Breakfast**  (3 portions carbohydrate) | 2 small chapatti or dosa  + 1 small potato  with 1 egg or 15g nuts | 2 Weet-Bix  + 250ml milk  + ½ small banana with 1 egg or 15g nuts |
| **Morning snack**  (2 portions carbohydrate) | 1 portion fruit  + 4 Vita-Weat crackers with 40g cheese | 200g tub fruit yoghurt |
| **Lunch**  (3 portions carbohydrate) | Lean meat curry: Mutton/lamb/chicken/fish  + 1 cup cooked long grain/basmati rice  + ½ plate salad or non- starchy vegetables | Vegetarian curry: Paneer/tofu  + 2 small chappati  + 1 small potato or 1 cup cooked pumpkin  + ½ plate salad or non- starchy vegetables |
| **Afternoon snack**  (2 portions carbohydrate) | 1 portion fruit  + 200g natural yoghurt | 1 portion fruit  + 4 Vita-Weat crackers with 40g cheese |
| **Dinner**  (3 portions carbohydrate) | Lean meat curry: Mutton/lamb/chicken/fish  + 1 cup cooked long grain/basmati rice  + ½ plate salad or non- starchy vegetables | Vegetarian curry:  ¾ cup lentils  + 2 small chappati  + ½ plate salad or non- starchy vegetables |
| **Evening snack**  (1 portion carbohydrate) | 250ml milk  + 30g nuts | 1 slice multigrain bread with natural peanut butter or avocado |

Avoid eating in the two hour period between your meal and blood glucose test.

# What can I drink?

Drink mainly water, plain mineral water and soda water. Add fresh lemon or lime for flavour.

* Plain milk provides a good source of calcium and protein. Remember milk contains carbohydrate and needs to be included in your carbohydrate portions.
* Tea, coffee, diet soft drink and diet cordials can be consumed in moderation.

# What if I still feel hungry?

If you still feel hungry add extra foods that are low in carbohydrate to your meals and snacks.

* + Non starchy vegetables or salad (refer to the table on page two)
  + Meat, chicken, fish, tofu, eggs, plain nuts, seeds
  + Cheese or hot paneer
  + Avocado

# What if my blood sugars are still high?

In some instances, you may be eating correctly the right amount and type of carbohydrate but will still have high blood glucose levels. If this occurs it is important not to avoid carbohydrates as severe dietary restriction may result in an increased risk of pregnancy complications. Some women need extra help to manage their blood glucose levels and may require insulin.

Please contact the Mercy diabetes educators if your blood glucose levels are high.

**After your pregnancy**

# Am I at risk of developing Type 2 diabetes?

Your blood glucose levels will usually return to normal after the birth of your baby. Gestational diabetes is a risk factor for developing Type 2 diabetes later in life.

Eating healthy foods, controlling body weight, regular exercise and breastfeeding can reduce this risk

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| **Further Information**  If you have any questions regarding this information, please contact:  **Mercy Hospital for Women**  Phone: 03 8458 4165  **Werribee Mercy Hospital**  Phone: 03 8754 3150 | **Acknowledgements**  Produced by: Nutrition and Dietetic Department Mercy Health acknowledging Baker IDI Heart and Diabetes Institute  Date produced: November 2018 Date of last review: June 2023 Date for review: June 2026 |

**Photographs:** [www.theismaili.org/what-should-your-plate-look,](http://www.theismaili.org/what-should-your-plate-look) <http://healthonabudget.com/is-indian-food-healthy/>