

## Healthy Eating for Mothers-to-be with Gestational Diabetes

### In Brief:

- **Eat a variety of nutritious foods** including multigrain bread, rice, pasta, noodles, wholegrain cereals, vegetables (including legumes), fruit, low fat dairy products and lean meats.
- **Eat regular meals** and healthy mid meal snacks, and avoid getting hungry.
- **Include carbohydrate foods** (preferably slow release or 'low Glycaemic Index') at all meals and snacks.
- **Limit fatty foods** especially foods high in saturated fats.
- Foods and drinks which contain large amounts of sugar are not recommended.
- Be active in as many ways as you can each day



### Acknowledgments

This publication was written with the assistance of the following information:

- "Questions that may be on your mind!" Nutrition Department, Central Coast Area Health Service NSW.
- "Living with Gestational Diabetes". Dietitian's Association of Australia.
- "The 1 2 3 4 5 + Food Plan". C.S.I.R.O.
- "The Australian Guide to Healthy Eating". 2013

## **What is Gestational Diabetes?**

Gestational Diabetes is a form of diabetes that occurs during pregnancy. It causes the amount of sugar (glucose) in your blood to rise. Most women with well managed Gestational Diabetes have healthy babies.

After the baby is born and the placenta has passed, Gestational diabetes will cease. However, you have a higher risk of developing Gestational diabetes in future pregnancies and Type 2 diabetes later in life. Gestational diabetes does not increase the risk of your baby having diabetes in childhood; however, your child has a high risk of developing Type 2 diabetes later in life. Encouraging your child to be active, have a healthy lifestyle and avoiding excess weight gain, will help to reduce this risk.

## **The Aims of Healthy Eating for Gestational Diabetes**

- To manage blood glucose levels within an acceptable range: 4 to 7 mmol/L
- Provide sufficient energy, protein and other important nutrients to support the needs of both yourself and your baby
- Avoid excessive weight gain

## **How Do I Control My Blood Glucose Levels?**

Healthy eating and regular physical activity are essential in managing blood glucose levels and to meet the needs of your growing baby.

Many women who are diagnosed with Gestational diabetes are able to manage blood glucose levels through diet and exercise.

Be active in as many ways as you can, as exercise is the key to good health! You could try all types of things, such as walking, swimming, dancing, tai chi, aqua-aerobics, or cycling. You could also try to increase your incidental activity during the day e.g. park your car further from the shops and get up to change the T.V. channel instead of using the remote control. All forms of activity will help to:

- Increase your fitness
- Prevent constipation
- Help you relax
- Maintain good circulation
- Tone muscle



It is important to avoid becoming over-tired, so be sure not to overdo it! Always check with your doctor before starting regular exercise.

It may also be necessary to test your blood glucose levels (BGL). The Diabetes Nurse Educator will explain this in more detail if it is required.

## Carbohydrate Foods

Carbohydrate foods provide our bodies with energy. When these foods are eaten they breakdown to glucose (the type of sugar in blood) in our body. Carbohydrate foods are also good sources of fibre, vitamins and minerals.

Foods not high in carbohydrate are:

- Free vegetables (non-starchy)
- Protein foods including meat, fish, eggs, nuts, and cheese
- Fats and oils

### Foods That Are High In Carbohydrate Include:

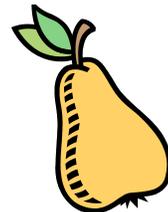
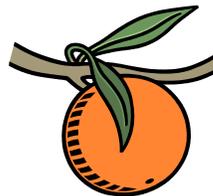
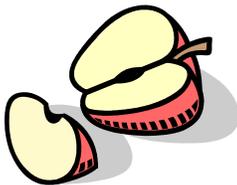
- Breads, cereals, rice, pasta, grains & flour
- Fruit, dried fruit and fruit juice
- Starchy vegetables, such as potato, sweet corn and sweet potato
- Milk & dairy, including yoghurt, custard and ice-cream
- Legumes (baked beans, kidney beans, lentils etc)
- Foods made with any type of sugar, such as regular soft drinks



## Eat Regular Meals

To help manage blood glucose levels, it is important to have regular meals and snacks during the day that contain low Glycaemic Index (slow burning) carbohydrate foods. It is important to have three meals a day and include regular snacks, such as morning tea, afternoon tea and supper.

- Eat some carbohydrate foods at each meal and snack
- Eat three meals a day with regular snacks
- Avoid getting hungry
- Do not skip or delay meals



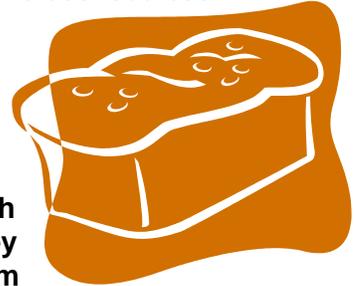
## Choose Carbohydrates with a Low Glycaemic Index

- All carbohydrate foods are broken down in the body to glucose. However, they are all broken down by the body at different rates. Some carbohydrate foods are broken down to glucose quickly and some are broken down more slowly. Some carbohydrate foods can therefore, produce a rapid rise in blood glucose levels while others produce a more gradual effect. This is referred to as Glycaemic Index (GI)
- Carbohydrate foods that break down to glucose more slowly are the best sources of carbohydrate for good blood glucose levels
- **Choose at least one slow release (or low GI) carbohydrate at every meal (foods from the 'Best' column)**
- Include foods from the 'Good' (medium GI) column in moderation



- **Limit foods from the 'fast release' (or high GI) column and always make sure they eaten in a meal where there is a food from the 'Best' column**

- Choose carbohydrate snacks from the either the 'Best' or the 'Good' columns

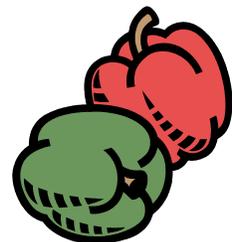
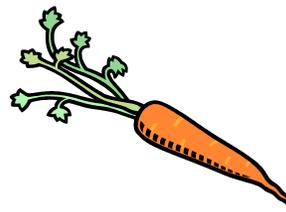
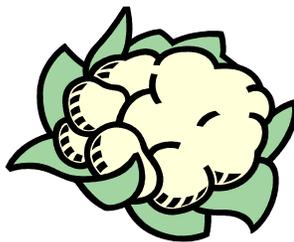
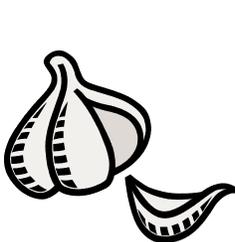


See the list in the resource pack.

## Free Foods

Free foods are low in carbohydrate and they will not affect your blood glucose levels. They can add variety to your meals and can also provide essential vitamins and minerals to help both you and your baby stay healthy. If your blood glucose levels are high but you are still hungry, these are good foods to snack on. These foods are also good to add to main meals where carbohydrate foods need to be limited to 2-3 serves and you feel like eating more.

See the list in the resource pack.



## Limit Foods High In Sugar

A small amount of sugar is OK. It should be made part of a meal that is low in fat, high in fibre and includes a low GI food.

For example, it is acceptable to include one of the following at a meal:

- 1 to 2 teaspoons of honey or sugar on porridge
- 1 to 2 teaspoons of honey or 100% fruit jam on wholegrain toast



Food and drinks that contain large amounts of sugar are not recommended for people with diabetes, such as:

- Ordinary jelly, soft drinks, fruit juice drinks and cordials
- Fruit canned in light or heavy syrup (choose fruit tinned in natural juice)
- Lollies, throat soothers, chewing gum
- Any foods which contain large amounts of golden syrup, maple syrup, sweetened condensed milk, treacle, honey or sugar of any type.



These foods contain concentrated amounts of sugar that provide the body with little nutritional value and therefore, should be limited.

## Artificial Sweeteners

The following artificial sweeteners may be used in small amounts if desired, however, they are not essential to use: Aspartame (NutraSweet, Equal) (951), Sucralose (Splenda) (955), Isomalt (953), Acesulphame K (950) and Alitame (Aclame) (956). The sweeteners cyclamate (952) and saccharin (954) are **not** recommended for pregnancy.

## Limit Foods High In Fat

Fatty foods may lead to excess weight gain and poor management of blood glucose levels. You can control your fat intake by:

- Using margarine instead of butter, and using it sparingly
- Use oil sparingly
- Choose low fat dairy foods
- Choose lean cuts of meat. Trim the fat of meats and remove the skin from chicken, preferably before cooking
- Use low fat cooking methods e.g. grilling, steaming, microwave, BBQ, stir fry
- Limit high fat, processed and takeaway foods

## What Do I Need To Eat To Meet The Needs Of My Growing Baby?

**Energy:** You will need some extra energy to support the growth of your baby. This extra energy is equivalent to two pieces of fruit (600kJ) per day. It is important to listen to your body and eat regular meals and healthy foods to ensure you are providing yourself with enough energy.

**Protein:** Foods high in protein are needed to repair and maintain body tissue and build muscle. Protein is needed for the growth of the baby.

Choose protein foods with a low fat content. Protein is found in:

- Lean red meat
- Fish and seafood
- Skinless chicken and turkey
- Eggs, legumes and nuts
- Milk, yoghurt and cheese
- Tofu



**Calcium:** Calcium is important at all times to help prevent osteoporosis. It is especially important during pregnancy, to assist in the development of strong bones and teeth for your baby, and to maintain your own supply.

**Aim for 2-3 serves a day**

Choose low fat dairy foods.

1 serve =

- **1 glass milk (250ml)**
- **1 slice of cheese (30g)**
- **200g tub yoghurt**
- **2 scoops of low fat, reduced sugar ice cream.**



Other sources include: fish with edible bones (eg. Canned salmon, sardines), fortified soy products, almonds and broccoli. The richest source of calcium is dairy foods.

**Iron:** Pregnant women are at risk of low iron levels because of the extra blood that is needed during pregnancy.. Iron helps to carry oxygen around the body and to the baby. The amount of iron you require almost doubles during pregnancy. Low iron levels causes tiredness and makes you less able to fight infections, it can lead to baby being born with low iron stores and can persist after baby is born.

The best sources of iron are lean red meat (all types like beef and lamb), chicken, fish (including canned salmon and tuna). Iron is also found in plant sources, such as leafy green vegetables, whole grain breads and cereals, legumes, dried fruit and nuts, but it is not as well absorbed from these foods as it is from the iron in meats. Eating a vitamin C rich food with plant sources of iron can improve the absorption of

the iron in the body. Foods such as citrus fruits, kiwi fruit, strawberries & capsicum may help.

If you are not a big meat eater or you are vegetarian, you may need an iron supplement to help you get enough iron while pregnant. Your Doctor will advise you on this.

**Folate:** Folate is important for blood formation and normal development of your baby. It is needed to help produce new cells.



Folate is found in green leafy vegetables like spinach, broccoli, brussel sprouts, cabbage and salad greens. It is also found in liver, kidney, nuts, wholegrain bread, cereals and oranges. Liver should be limited to 50gms per week when pregnant as it is very high in vitamin A which can be toxic to a developing baby in large amounts.

**Fibre:** A diet high in fibre helps to control blood glucose levels, prevent constipation and helps to satisfy your hunger. Good sources of fibre include:

- Vegetables & fruits
- Legumes, lentils, seeds & nuts
- Wholegrain breads and cereals

## Fluid

### **An adequate fluid intake is very important**

- Have 6-8 glasses of fluid per day (preferably water)
- If you drink tea, limit it to 4 cups a day
- If you drink coffee, limit to 3 cups of instant coffee **or** 2 cups of brewed coffee a day
- Drink tea and coffee at a separate time to your meals, as they can interfere with the absorption of iron from plant foods
- If you drink soft drink or cordial, choose diet varieties and avoid cola soft drinks or those containing caffeine (Redbull, V, Mother, etc)
- Alcohol should be avoided when pregnant and breastfeeding



## **This Sample Meal Plan Contains Important Nutrients For Pregnancy**

The foods in **bold** are carbohydrate foods

### **Breakfast**

- Low GI cereal such as **Porridge**, **All-bran™**, **Special K™**
- **Milk** (reduced fat or skim), **Soy milk** OR **Low fat yoghurt**
- **Multigrain toast** (1-2 slices) with margarine (thin scrape) and vegemite, low fat cheese, 100% fruit jam, tomato

**Choose 1 or more of these options depending on your usual intake.**

### **Lunch**

- 1 **sandwich** or **bread roll** (multigrain)
  - Fillings: **LEAN MEAT**; Salmon (with the bones), tuna, fresh ham **or** chicken, fresh roast beef/lamb **or** pork **or** egg
  - **SALAD**: Freshly prepared lettuce, tomato, cucumber, low fat cheese, onion etc
- One 200g tub **low fat yoghurt** (plain/ flavoured) **OR**
- 1 serve of **fruit** (fresh or canned in natural juice)

**Some people may find 1 sandwich sufficient.**

### **Dinner**

- Lean red meat like steak (grilled or baked) **OR** Lean mince **OR** Fish (grilled or baked) **OR** Skinless Chicken (grilled or baked)
- Carbohydrate: **Potato** (1 medium) and **sweet potato** or **sweet corn** **OR** 1 cup cooked **rice** (Basmati/Doongara 'Clever Rice') /**rice noodles** **OR** 1½ cups cooked **pasta**
- Vegetables/Salad: broccoli, carrot, beans, spinach, tomato, cucumber, lettuce, snow peas etc (refer to the Free Foods List)

### **Mid Meal Snacks**

- **Low fat yoghurt** (plain / flavoured) or diet yoghurt
- **Low fat milk** (one glass)
- **Fruit loaf** or **grainy/sourdough bread** (1 slice)
- **Cracker biscuits** like Ryvita™, Vitawheat™ or Salada™ (2-3) with tomato, low fat cheese, cottage cheese, vegemite or a thin spread of peanut butter
- **Pumpkin** or **plain scone** or 2 **pikelets**
- **Fruit** (1 piece) or **dried fruit** (small handful) or **tinned fruit** in natural juice
- **Low fat ice cream** (2 scoops)
- Low fat **Custard** with **fruit**

**Choose one option per snack**