

Gestational Diabetes

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Being diagnosed with gestational diabetes can be a shock and upsetting. You may be worried about the health of your baby or that there will be problems with the birth, however you can have a healthy baby with effective diabetes management and support from your health care team.

What is gestational diabetes?

Gestational diabetes is a form of diabetes that occurs during pregnancy and usually goes away after the baby is born. Between 10% to 15% of pregnant women will develop gestational diabetes and this usually occurs around the 24th to 28th week of pregnancy.

Registration on the National Gestational Diabetes Register is free

and open to all Australian residents who hold an Australian Medicare Card and who have been diagnosed with gestational diabetes by a health professional.

Step 1: Ask your doctor to complete the NDSS registration form. Once you have signed the form, you can send it to the NDSS office in your State or Territory. This card will give you access to a wide range of free and subsidised NDSS products, as well as services, information and support.

Step 2: After registering, you will receive an NDSS card. This card will give you access to a wide range of free and subsidised NDSS products, services, information and support.

Diabetes is a common condition in which the body's cells are unable to effectively obtain glucose from the bloodstream. Glucose is required to provide the body with energy for day-to-day activities. The hormone insulin moves glucose from the blood into the body's cells, where it can be used for energy.

Gestational diabetes is associated with an increased risk of complications in pregnancy and birth, as well as a greater likelihood of mother and child developing type 2 diabetes later in life. The good news is that with good management of gestational diabetes, and a healthy lifestyle after the pregnancy, these risks are significantly reduced.

Gestational diabetes will not lead to your baby being born with diabetes.

What causes gestational diabetes?

In pregnancy, the placenta (the blood source for the baby) produces hormones that help the baby grow and develop. Some of these hormones block the action of the mother's insulin which is called insulin resistance. During pregnancy, to keep the blood glucose levels normal, mothers need to make 2 to 3 times the normal amount of insulin due to this insulin resistance.

If the body is unable to produce the extra insulin or becomes more resistant, gestational diabetes develops. When the baby is born and the insulin requirements fall, glucose levels return to normal and diabetes usually disappears.

Who is at increased risk of gestational diabetes?

- » Women who have had gestational diabetes
- » Older mothers, especially over the age of 35 years
- » Women from certain ethnic backgrounds including:
 - Asian (including Indian)
 - Pacific Islander
 - Maori
 - Middle Eastern
 - Non-white African
- » Women with a family history of type 2 diabetes

- » Women who are obese
- » Indigenous Australians
- » Women who have had large babies or obstetric complications
- » Women who have polycystic ovarian syndrome

How is gestational diabetes diagnosed?

The oral Glucose Tolerance Test (GTT) is used to assess how your body responds to a glucose load. After fasting for 8-12 hours, a blood sample is taken. You then have a drink containing 75g of glucose and blood samples are taken one and two hours later. If the blood glucose is above the normal level, you have gestational diabetes.

Why does gestational diabetes need to be treated?

If a mother's blood glucose levels are high, glucose passes through the placenta to the baby. This may lead to the baby growing larger than the average baby. Giving birth to larger babies can potentially cause problems for both the mother and child during and following the birth. However, the baby's blood glucose level may be too low (**hypoglycaemia**) at birth.

There can be long term effects for the baby also. The baby has a higher risk of becoming an overweight child and adult and has an increased risk of developing type 2 diabetes.

Untreated gestational diabetes can also lead to a greater likelihood of developing high blood pressure during the pregnancy. For many women, being diagnosed with gestational diabetes may be upsetting. However, by working closely with your doctor and health care team you can keep your blood glucose levels within the target range to provide the best outcome for both you and your baby.

How is gestational diabetes managed?

You can manage your gestational diabetes by:

- » Healthy eating
- » Physical activity
- » Monitoring your blood glucose levels
- » Medication (if needed)

Healthy eating

What foods should I eat?

Following a healthy eating plan is an important part of diabetes management and will help to:

- » keep your blood glucose levels within the target range advised by your doctor or diabetes educator
- » provide adequate nutrition for you and your growing baby
- » achieve appropriate weight changes during your pregnancy

Women with gestational diabetes are encouraged to:

- » eat regular meals
- » eat smaller main meals with healthy snacks in between
- » satisfy their hunger and maintain a healthy weight
- » include some carbohydrate in every meal and snack

Choose foods that:

- » are varied and enjoyable
- » are low in fat, particularly saturated fat, and high in fibre
- » are a good source of carbohydrate (grains, cereals, fruit, pasta, rice)
- » provide the nutrients you need during pregnancy

Nutrients required in higher amounts for pregnancy include:

- » calcium (milk, cheese, nuts, tahini)
- » iron (red meat, chicken, fish, chickpeas, tofu)
- » folic acid (dark green leafy vegetables)

If it is possible, it is helpful to see a dietitian who will advise you on getting the proper nutrients for you and your baby, while helping you to make healthy food choices for managing your blood glucose levels.

Carbohydrates

Carbohydrate foods are broken down into glucose and used by the body for energy. They are very important for you and your baby. To help manage your blood glucose levels, it is important to spread your carbohydrate foods over 3 small meals and 2-3 snacks each day.

Foods containing carbohydrate include:

- » multigrain or wholegrain breads and breakfast cereals
- » pasta, noodles and rice (preferably Doongara or Basmati rice as they have a lower glycaemic index and will help you to stay fuller longer)
- » potato, sweet potato and corn in moderation
- » legumes such as baked beans, red kidney beans and lentils
- » fruits
- » milk, yoghurts

Carbohydrate foods that contain little nutritional value include sucrose (sugar), soft drinks, cordials, fruit juices, cakes and biscuits. It is wise to avoid these foods.

In some women, blood glucose levels continue to be high, even with healthy eating and regular activity.

If this happens to you, it is important not to cut back on carbohydrates as the baby requires carbohydrate as its main energy source. Some women's bodies require help to manage blood glucose levels and insulin injections may be needed.

Glycaemic Index (GI)

The GI is a measure of how quickly the carbohydrate in a food will affect the level of glucose in the blood. Foods that have a high GI will raise the blood glucose levels quickly, while those with a low GI will raise the blood glucose levels more slowly. Foods with a low or medium GI may be better choices when trying to manage blood glucose levels. The GI of foods does not change the serving sizes.

Lower GI foods can:

- » prevent large changes in blood glucose levels
- » make you feel satisfied for longer
- » help manage your weight

Low GI=less than 55,

Medium GI=56-69, **High** GI=over 70

For more information go to the GI website: glycemicindex.com

Fat

Use healthier fats like canola and olive oils, unsaturated oils, margarines, avocados and unsalted nuts. Limit the amount of fat you eat, particularly saturated fats by selecting lean meats, skinless chicken and low-fat dairy foods. Avoid takeaway and processed foods.

Protein

Include two to three small serves of protein each day as protein is important for you and your baby. Protein can also help you feel full for longer.

Protein foods include lean meat, skinless chicken, fish, eggs and reduced fat cheese. Milk, yoghurts, custards and legumes (beans, lentils, chickpeas) are also important sources of protein.

Half your plate should include vegetables or salad. A quarter of the plate is protein food and another quarter is carbohydrate foods.

Can I use artificial sweeteners?

The following sweeteners may be used in small amounts:

- » Aspartame (951)*
- » Sucralose (955)*
- » Acesulphame Potassium (950)*

*look for these numbers on the food label ingredients list

What can I drink?

Drinks such as cordial, juice and soft drink are high in energy and sugar so a better choice is to drink water, plain mineral water or soda water – try it with a fresh lemon or lime for something different.

Alcohol

The Australian guidelines recommend that for women who are pregnant, planning a pregnancy or breastfeeding, avoiding alcohol is the safest option. There is strong evidence that heavy alcohol intake harms the baby, though the effects of low to moderate intake are less clear.

Physical activity

Anything that gets you moving is generally good for your diabetes. Walking is a great way to be physically active, without even noticing you are 'exercising'.

Here are some tips on how you can incorporate more walking into your life:

- » start a walking group with family or friends
- » walk instead of driving to the local shops
- » take the stairs instead of the lift
- » stand and move while on the phone
- » gardening

For women with gestational diabetes, moderate intensity physical activity can help to manage blood glucose levels.

'Moderate' means a slight but noticeable increase in breathing and heart rate.

If there are no specific obstetric or medical conditions, you should be able to safely exercise during pregnancy. However, it is best to discuss this with your doctor.

Regular activities such as walking or swimming help to:

- » keep you fit
- » prepare for the birth of your baby
- » manage your blood glucose levels

Remember, before starting or continuing any form of physical activity, always check with your doctor.

Monitoring your blood glucose levels

Regularly testing your **Blood Glucose Level** (BGL) enables treatment to be assessed and changed as necessary.

Testing your own blood glucose levels will help you to:

- » better understand the effect of food and lifestyle on blood glucose levels
- » know when to ask for advice from your health professionals
- » develop confidence in managing your diabetes

Your doctor or diabetes educator will advise you what blood glucose levels to aim for, and how to test them.

The most common times to test blood glucose levels are when you wake up in the morning (fasting) and 2 hours after each meal. Other testing times may include 1 hour after meals and/or before meals.

Medication (if needed)

What if blood glucose levels are too high?

If your blood glucose levels cannot be managed by healthy eating and physical activity alone, your doctor may suggest medication.

Insulin treatment may be needed to bring the blood glucose levels into the target range.

Insulin does not cross the placenta or affect your baby.

Insulin is given by injection using an insulin device. This device can deliver the insulin at a push of a button. If insulin is required, your diabetes educator or doctor will demonstrate how to use the insulin device and where to inject the insulin.

The injected insulin will help to lower your blood glucose level to within a range that is best for your baby's growth and development.

While many women are initially reluctant to give an injection, most find it less uncomfortable than testing their blood glucose. The injection of insulin will not harm your baby.

The diabetes team will advise you of the appropriate starting dose of insulin. It is common for the insulin dose to be increased regularly as the insulin resistance from the placental hormones increases until close to the birth.

Your diabetes team will regularly review your blood glucose levels and advise you of the correct insulin doses to take.

What if blood glucose levels are too low?

If you are having insulin injections, it is possible for blood glucose levels to go a little low, although this is not common. You may feel weak, shaky or sweaty. A low blood glucose level is called **hypoglycaemia** or a **'hypo'** and is treated by having a drink or food containing quick acting glucose. Within a few minutes of having something sugary, your blood glucose level should return to normal. You should perform an extra blood test to check that your blood glucose levels have returned to normal.

Discuss taking control of 'hypos' with your diabetes team.

After the birth

Gestational diabetes will not lead to your baby being born with diabetes.

Your baby will be monitored carefully for the first 24-48 hours (heart rate, colour, breathing, blood glucose levels). The midwives will perform blood glucose tests (using heel pricks) on your baby to make sure its blood glucose levels are not too low. These will be monitored until they are satisfactory.

For women who required insulin

Insulin will usually be stopped after your baby is born. Your health team will advise you how often to monitor your blood glucose in the first few days after delivery to see whether the levels have returned to normal.

6-12 weeks after the birth

An oral Glucose Tolerance Test (GTT) is very important to check that diabetes has gone. In some women the diabetes does not resolve.

Remember to tell your doctor that you had gestational diabetes.

Future risks

Once you have had gestational diabetes, you are at a higher risk of developing diabetes later in life. Approximately 50% of women who have had gestational diabetes will develop type 2 diabetes within 10-20 years. If you have another pregnancy, there is a very high chance of developing gestational diabetes again.

For further information about gestational diabetes and taking care of yourself after your baby is born please visit ndss.com.au/gd or call 1300 136 588

The National Gestational Diabetes Register

The National Gestational Diabetes Register is a program within the National Diabetes Services Scheme (NDSS) to help women who have had gestational diabetes manage their health into the future. Your registration on the National Gestational Diabetes Register means that you and your doctor will be sent regular reminders about diabetes checks. You will also receive information for you and your family to help you continue a healthy lifestyle.

Regular screening will help detect whether you have developed diabetes. The earlier diabetes is diagnosed and managed, the better your health will be.