

# Gestational diabetes

Blood glucose levels are regulated by insulin, a hormone produced by the pancreas. Insulin moves glucose from the blood into the body's cells where it can be used by the body for energy. Diabetes is a condition where the glucose in the blood rises above normal levels.

Gestational diabetes is a type of diabetes that develops in pregnancy. In South Australia, gestational diabetes is becoming more common and now affects about 10% of pregnant women.

## What causes gestational diabetes?

In pregnancy, the amount of insulin you need is higher than normal as you are providing for both you and your baby. As your pregnancy progresses into the 2<sup>nd</sup> and 3<sup>rd</sup> trimester, the amount of insulin you and your baby needs increases.

Your placenta is also producing other hormones that support the baby to grow and develop. These hormones make it harder for your body's insulin to work properly. This condition is called 'insulin resistance'.

Gestational diabetes develops when your body is unable to produce the extra insulin needed or the insulin you make doesn't work as well as before.

## Who is at risk of gestational diabetes?

All pregnant women are tested for gestational diabetes between 24-28 weeks of the pregnancy. You have an increased chance of developing gestational diabetes if you:

- > have a family history of type 2 diabetes or gestational diabetes
- > had gestational diabetes in a previous pregnancy
- > previously given birth to a large baby (eg weighing greater than 4.5kg)
- > have polycystic ovarian syndrome
- > are an Indigenous or Torres Strait Islander Australian
- > are from certain ethnic backgrounds (eg Asian, Indian subcontinent, African, Middle Eastern, Polynesian/Melanesian)
- > are over 40 years of age
- > are above your healthy weight range
- > are taking some types of antipsychotic or corticosteroid medication.

## How is gestational diabetes diagnosed?

A glucose tolerance test is done at 24-28 weeks of pregnancy. This test may need to be done earlier if you have an increased risk of developing gestational diabetes.

If the amount of glucose in the blood rises above the normal level, gestational diabetes is diagnosed.

## What are the risks?

Most women who have gestational diabetes give birth to healthy babies. However, high blood glucose levels can cause problems for you and your baby.

Gestational diabetes may increase your risk of high blood pressure and preeclampsia. It also increases your risk of type 2 diabetes as you get older.

Your baby's development may also be affected and miscarriage and stillbirth have been reported. High blood glucose levels increase your baby's risk of extra weight gain. Being too large for gestational age may mean that your baby is born early (eg even if they are not mature enough) or that the birth is complicated (eg needing caesarean section). Babies born early can also experience breathing difficulty and may need help until their lungs mature. Sometimes babies may develop low blood glucose (hypoglycaemia) shortly after birth and need help to return their blood glucose level to normal.

Keeping your blood glucose levels within the normal range will reduce the risks.

## How is gestational diabetes managed?

The management of gestational diabetes is a team effort, involving you, your partner and health care team. The doctor, specialist, midwife, dietitian and credentialled diabetes educator are here to help.

Gestational diabetes is managed with dietary and physical activity advice. Sometimes a medication (called 'Metformin') and/or insulin therapy is needed.

## Dietary advice

Dietary advice includes eating regular meals and eating small amounts often.

Complex carbohydrates (eg multigrain breads, wholegrain cereals, brown rice, wholemeal pasta), legumes (eg baked beans, lentils), fruit, milk and yoghurt are good choices. Carbohydrates that have little nutritional value (eg cakes, biscuits, soft drinks) will cause a rise in blood glucose and are not recommended.

The dietitian can assist you to develop an eating plan. This plan will include advice about food safety, lowering saturated fats, increasing fibre and your protein, calcium and iron requirements. You may find the 'Australian Guide to Healthy Eating' useful <https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating>.

## Physical activity advice

Physical activity helps to reduce insulin resistance and is a good way to lower blood glucose levels. Physical activity, such as brisk walking, also helps you keep fit and prepares you for the birth of your baby. Check with your doctor before starting any form of physical activity that you weren't doing before you became pregnant. Contact your doctor immediately if you experience pain or discomfort after physical activity.

## Blood glucose monitoring

Blood glucose monitoring guides your treatment and assists you to understand the effect of dietary intake and physical activity. The target ranges for blood glucose levels are lower during pregnancy than target ranges for people with diabetes who are not pregnant. Your blood glucose level targets are:

- > fasting (before breakfast): less than or equal to 5.0mmol/L
- > 2hours after eating: less than or equal to 6.7mmol/L.

Your credentialed diabetes educator will show you how to blood glucose monitor, provide you with a meter and initial supplies and offer advice on what to do if the blood glucose is out of target.

It is important to discuss your blood glucose levels with your doctor or credentialed diabetes educator weekly for the remainder of your pregnancy.

<b>Doctor/Credentialed Diabetes Educator contact number:</b>	
<b>Day and time to make contact:</b>	

## Medication

Despite making changes to improve dietary intake and physical activity levels, 1 in 5 (20%) of women with gestational diabetes still need extra help to bring their blood glucose levels back into the target range.

Most diabetes tablets, such as those taken by people with type 2 diabetes, are not used in pregnancy or when breast feeding. 'Metformin' can be considered if you need extra help. However, it is important that you are informed of the potential risks, benefits and areas of uncertainty. The use of 'Metformin' should only be in consultation with a specialist.

Insulin therapy in pregnancy is safe and very effective. Insulin therapy is given by injection because insulin does not work when it is taken by mouth. Insulin injections are prescribed before meals and/or before bed. The doctor and credentialed diabetes educator will assist you with your individual plan, education and initial supplies.

## Planning for labour, birth and breastfeeding

Most women with gestational diabetes will have a pregnancy that progresses normally and without complication. Your birth plan will be dependent on the local maternity care options, your blood glucose, whether medications are required and your obstetric and medical history.

Your blood glucose levels will be monitored during labour. Most women have blood glucose levels in target during labour and don't need any extra insulin. If your blood glucose level becomes high, insulin therapy may be used.

After the birth, most women with gestational diabetes have blood glucose levels in target because their insulin needs return to normal and the baby is able to make their own insulin. In most cases insulin therapy is stopped.

Breastfeeding is encouraged and any type of birth control can be used.

## Future

To check that the blood glucose levels have stayed in the target range, an oral glucose tolerance test is needed after 6-12 weeks after your baby's birth. Please speak with your doctor to arrange this.

Your doctor will also want to do a diabetes test before you become pregnant again and early in your next pregnancy.

Approximately 50% of women who have had gestational diabetes will develop type 2 diabetes within 10-20 years. Even if you choose not to become pregnant again, your doctor will want to do a diabetes check every 1-2 yearly. Your best protection is a healthy diet, a healthy weight and a regular physical activity plan.

## National Gestational Diabetes Register

If you register on the [National Gestational Diabetes Register](#), you and your doctor will be sent regular reminders to have diabetes checks. Registration is free and your doctor or credentialled diabetes educator can assist you to do so.

## Where can I go for more information?

Diabetes Australia – [Managing Gestational Diabetes](#)

Diabetes SA – [Pregnancy & Diabetes](#)

National Diabetes Services Scheme (NDSS) – [www.ndss.com.au](http://www.ndss.com.au)

## For more information

**Diabetes Service**

**Rural Support Service**

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Telephone: (08) 8226 7168

[www.chsa-diabetes.org.au](http://www.chsa-diabetes.org.au)

[www.sahealth.sa.gov.au/regionalhealth](http://www.sahealth.sa.gov.au/regionalhealth)

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