

gestational diabetes

Gestational diabetes occurs during pregnancy and usually goes away after the baby is born. Diabetes is a common condition in which the body is unable to use the glucose in the blood for energy as effectively as usual. This is because the body isn't making enough of the hormone insulin, or the insulin isn't working properly. Insulin moves glucose from the blood into the body's cells where it can be used by the body for energy.

Who is at increased risk of gestational diabetes?

- > Women over 30 years of age.
- > Women with a family history of type 2 diabetes.
- > Women who are overweight.
- > Indigenous Australians and Torres Strait Islanders.
- > Certain ethnic groups are also at increased risk:
 - Indian
 - Vietnamese
 - Chinese
 - Middle Eastern
 - Polynesian / Melanesian
- > Women who have had gestational diabetes during previous pregnancies.
- > Women who have had difficulty carrying a pregnancy to term.

How is gestational diabetes diagnosed?

Most women are diagnosed after special blood tests. A Glucose Challenge Test (GCT) is a screening test where blood is taken for a glucose measurement one hour after a glucose drink. If this test is abnormal then an Oral Glucose Tolerance Test (OGTT) is done. For an Oral Glucose Tolerance Test a blood sample is taken before and two hours after the drink.

Usually these tests are performed when the woman is between 24 to 28 weeks pregnant, however it may be done earlier for women with many risk factors for gestational diabetes.

From 3 to 8% of pregnant women will develop gestational diabetes around the 24th to 28th week of pregnancy. It is at this time that special blood tests are carried out, except for those women at high risk who may be tested earlier.



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What causes gestational diabetes?

In pregnancy, the placenta produces hormones that help the baby to grow and develop. These hormones also block the action of the mother's insulin. This is called insulin resistance. Because of this insulin resistance, the need for insulin in pregnancy is 2 or 3 times higher than normal. If the body is unable to produce this much insulin, gestational diabetes develops. When the pregnancy is over and the insulin needs return to normal, the diabetes usually disappears.

How will diabetes affect my baby?

As gestational diabetes usually develops around the 24th to 28th week of pregnancy, the baby's development is not affected. As glucose crosses the placenta, the baby is exposed to the mother's high glucose level. This high level of glucose in the baby's blood stimulates the baby's pancreas to produce extra insulin. The extra insulin causes the baby to grow bigger and fatter. The result of this may be a large baby that may need to be delivered early but may not be mature enough.

Another problem is that once the baby is born and no longer exposed to high glucose levels from the mother, low blood glucose may result shortly after birth as the baby's system is immature and unable to adapt to this change.

When gestational diabetes is well controlled, these risks are greatly reduced.

How is gestational diabetes treated?

The management and treatment of gestational diabetes is a team effort, involving the woman with gestational diabetes and her partner, her doctor (and sometimes specialists), dietitian and diabetes educator.

There are three basic components to effectively treat gestational diabetes. They involve:

- > eating pattern
- > physical activity
- > monitoring blood glucose levels

Eating pattern

The most important part of treatment relates to food. Women with gestational diabetes are encouraged to:

- Eat small amounts often. It is important to satisfy your hunger and maintain a healthy weight.
- Include some carbohydrate in every meal and snack.

- Choose foods that are:
 - varied and enjoyable.
 - providing the nutrients you especially need during pregnancy
eg: foods which include calcium, iron and folic acid.
 - low in fat, particularly saturated fat, and high in fibre.
 - moderate in carbohydrate, eg: grains, cereals, fruit, pasta and rice.

It is essential to see a dietitian who will make sure you are getting the proper nutrients for you and your baby, while helping you to make healthy food choices for the gestational diabetes.

Physical activity

Physical activity helps to reduce insulin resistance. Regular exercise, like walking, helps to keep you fit and prepares you for the birth of your baby. As physical activity also helps to keep your blood glucose level under control, if you are feeling tired and therefore are less active, your blood glucose levels will be higher.

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

Monitoring blood glucose levels

Regularly testing your blood glucose levels is essential so that treatment can be assessed and changed as necessary. Your doctor or diabetes educator will tell you what blood glucose levels to aim for. During pregnancy these are similar to levels in pregnant women who don't have diabetes and are lower than for people with diabetes who are not pregnant.

Targets are 3.5mmol/L to less than 5.5mmol/L fasting and 4mmol/L to 7mmol/L two hours after a meal.

Insulin injections may be needed to help bring blood glucose levels into the target range. Blood glucose lowering tablets are generally not used in pregnancy.

What happens after my baby is born?

High blood glucose levels are usually not a problem after the birth of the baby. An OGTT will be performed around six weeks after the birth and will usually be normal. However there is an increased risk of you developing type 2 diabetes later in life with a 30 to 50% chance of developing it within 15 years after your pregnancy.

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For those women who are at increased risk, they will usually fall into one of three groups:

1. Diabetes (will be treated accordingly).
2. Normal Glucose Tolerance (will be re-tested every 2-3 years).
3. Impaired Fasting Glucose (Glycaemia) or Impaired Glucose Tolerance (will be re-tested every year). These two conditions are called pre-diabetes.

There are some positive steps you can take to help delay or even prevent the development of type 2 diabetes. It is important to:

- Continue a healthy eating plan.
- Be physically active.
- Keep your weight within your ideal weight range.
- Have your blood glucose level checked as outlined above.

For many people, being diagnosed with gestational diabetes can be upsetting. However, working closely with your doctor and health care team can help to keep your blood glucose levels within the target range to provide the best outcome for you and your baby.

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The design, content and production of this diabetes information sheet has been undertaken by the eight State and Territory member organisations of Diabetes Australia Ltd listed below:

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