

Gestational diabetes

Overview

Gestational diabetes is a form of diabetes that some women develop during pregnancy. Diabetes is a condition where blood sugar levels in the body rise either because the body is not producing enough insulin (a hormone) to break down sugars to use for energy or because the body does not respond to the insulin that is produced. While many women with gestational diabetes have no symptoms, some signs include increased thirst and hunger, weakness and excessive tiredness.

Approximately 3-8% of women in Australia will develop gestational diabetes and the risk is greater in people who are overweight or of Asian, Indian, Middle Eastern and Polynesian descent, or Aboriginal or Torres Strait Islander.

Gestational diabetes usually appears in the last three months of pregnancy (the third trimester) disappears again when the pregnancy is over, but the risk of developing type 2 diabetes later is higher for women who have had gestational diabetes. For Australian women, this risk increases at a rate of 2% per year for at least the next 25 years following pregnancy. However, there are things that can be done to decrease that risk, including following a healthy diet and getting regular exercise. These measures can prevent or delay the onset of type 2 diabetes.

Causes

During pregnancy, blood sugar levels after meals rise. In most women, these elevated blood sugar levels are counteracted by an increase of insulin produced by the pancreas.

By the third trimester, the pancreas needs to make up to three times the usual amount of insulin to maintain a balanced blood sugar level, but if the body cannot produce enough insulin, the blood sugar levels rise, causing gestational diabetes.

Many women have no known risk factors for developing gestational diabetes during pregnancy, but the following factors increase the risk:

- ▶ Being overweight prior to pregnancy.
- ▶ Being Aboriginal or Torres Strait Islander, a Pacific Islander, Asian, Middle Eastern or from the sub-continent.
- ▶ Being over 30 years of age. Risk increases with age.
- ▶ Having blood sugar levels that are high, but not diabetic.
- ▶ Family history of type 2 diabetes.
- ▶ Previously giving birth to a baby over 4kg.
- ▶ Having gestational diabetes with a previous pregnancy.

Symptoms

In most cases there are no symptoms, but some that are reported include:

- ▶ Increased thirst.
- ▶ Increased hunger.
- ▶ An increased need to urinate in large quanti-

ties.

- ▶ An increased frequency of thrush.
- ▶ Excessive tiredness.
- ▶ Weakness.
- ▶ Dizziness.
- ▶ Blurred vision.

Complications

Women with gestational diabetes are at greater risk of developing pre-eclampsia — a condition where blood pressure rises and increases the risk of premature birth for the baby and stroke for the mother. They are also at greater risk of requiring a Caesarian section — an operation to remove the baby from the uterus at birth.

Possible effects of untreated gestational diabetes on babies

Untreated gestational diabetes can affect babies in the following ways:

- ▶ **Macrosomia (large baby)** is when a baby is born weighing more than 4kg (9lb). This happens because the baby received too much sugar and its insulin levels spiked and converted the sugar to body fat. The fetus is, literally, overfed in the uterus. During delivery, large babies have increased risks of shoulder nerve damage and collarbone breaks.
- ▶ **Neonatal hypoglycaemia** is low blood sugar levels in the baby after birth. This happens because in the uterus the baby was over-producing insulin in response to the mother's high blood sugar. After delivery, the sugar supply from the mother is no longer present, but the baby's insulin level is still high. This results in a drop in its blood sugar, which can cause seizures.
- ▶ **Obesity problems during childhood and adolescence** are more common in children who were born to women with gestational diabetes.
- ▶ **Diabetes.** Children from mothers with gestational diabetes are more likely to develop diabetes themselves.

Treatment options

Gestational diabetes is treated by balancing the blood sugar levels in the body. In most cases, modifying the diet and increasing physical exercise can control blood sugar levels.

Diet

Eating a healthier diet of lean meats and less saturated fats like those found in dairy products, and sticking to low GI carbohydrates (carbohydrates that don't result in a quick rise in blood sugar levels) can help reduce blood sugar levels. Pregnant women should not, however, restrict food intake.

Exercise

Exercise helps use up the blood sugar and is important in reducing weight and blood sugar levels. If simple lifestyle changes are not enough to make a difference, medications such as insulin injections can be used safely in pregnancy.

Monitoring blood sugar levels

It is also essential to monitor blood sugar levels on a regular and consistent basis. There are many different portable devices available to measure blood glucose levels using a small drop of blood.

Women with gestational diabetes should have access to one of these instruments at all times and monitor their levels throughout the day. If the sugars are normal, they can feel confident that no harm is being done to the baby. Regular monitoring of the baby's growth is also recommended to ensure he or she is not getting too big because of the high blood sugar levels.

Medicines

The use of insulin to make up for a lack of insulin is one of the most effective ways to treat diabetes. There are two types — long-acting and short-acting insulin, which refers to how long they are effective for after injection. Often they are both used to help keep blood sugar under control.

Lifestyle and diet

When possible, women with gestational diabetes should receive nutrition counselling from a registered dietitian.

General guidelines

Some general guidelines include:

- ▶ Your diet should adequately meet the needs of pregnancy — 2,000 to 2,200 calories is generally recommended.
- ▶ Daily calories should be made up of approximately 40% carbohydrates (preferably low-GI), 20% proteins, and 40% fats.
- ▶ Artificial sweeteners may be used in moderation.
- ▶ Fibre may be increased to avoid constipation.

Helpful hints

The following practices can be very beneficial to expecting mothers with gestational diabetes:

- ▶ Exercise frequently throughout the pregnancy. Low to moderate exercise, such as walking or swimming, can help control weight, but if you are not a regular exerciser you should consult your doctor on what exercises would be most appropriate for you.
- ▶ Monitor blood sugar levels frequently, up to seven times a day. Pregnancy can cause fluctuations in blood sugar levels throughout the day.
- ▶ Take insulin or other medications as directed.
- ▶ Eat a healthy diet, with plenty of fruits, vegetables and whole grains.
- ▶ Schedule regular prenatal checkups to monitor the baby's growth and development.
- ▶ Treat low blood sugar quickly.
- ▶ Always carry a quick source of sugar, such as candy or glucose tablets.
- ▶ Wear a medical alert bracelet.

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Healthy pregnancy weight gain

When it comes to weight gain in pregnancy, women need to keep a close eye on how much they are gaining. The American Institute of Medicine recommends that Caucasians limit their weight gain to the following:

1. Women at a normal weight for their height (BMI of 18.5-24.9) should gain 11.3-15.9kg.
2. Underweight women (BMI less than 18.5) should gain 12.7-18.1kg.
3. Overweight women (BMI of 25 to 29.9) should gain 6.8-11.3kg.
4. Obese women (BMI greater than 30) should gain 5-9.1kg.

Online support

For additional support and resources, visit **Diabetes Australia**

www.diabetesaustralia.com.au

ItsMyHealth.com.au