GDM
Gestational Diabetes Mellitus

Diabetes Clinic, Women’s Health
Auckland Hospital
Gestational Diabetes

If you have been diagnosed with Gestational Diabetes you probably have many questions. This pamphlet will help you answer some of the more commonly asked questions about this condition.

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**Q What is gestational diabetes?**

**A** Gestational Diabetes (GDM) is defined as diabetes which is diagnosed in pregnancy.

- It is a fairly common complication of pregnancy
- It is usually symptom free
- It is diagnosed during routine screening.
- It is usually develops after the 24th week of pregnancy but can occur earlier. Women who are diagnosed in early pregnancy may have underlying diabetes that has not been recognised before.

Our body gets its major source of energy from glucose. Glucose is a form of sugar that comes from carbohydrate foods (e.g. bread, rice, potatoes, kumara, taro, corn, pasta, cereals, dried beans, lentils, milk, and fruit).

After these foods are digested they enter the blood stream as glucose. The body requires the assistance of a hormone called insulin to get **glucose** from the blood stream to the muscle and other tissues of the body to be used as energy. **Insulin production needs to increase four-fold in pregnancy.**

During pregnancy, the placenta nourishes your baby as it grows. Hormones from the placenta also help your baby develop. But these hormones can also block the normal action of insulin during pregnancy. This is called **insulin resistance.**

Insulin resistance means insulin does not work effectively in the mother’s body. Without enough extra insulin the glucose accumulates in the blood. **This is Gestational Diabetes.**
Q Why me?

A Some women have a higher risk of developing this condition. The risk factors include:

1. Overweight/obesity
2. Excessive weight gain in pregnancy
3. Family history of diabetes
4. Over 30 years of age
5. Previous history of Gestational Diabetes
6. Poor obstetric history – unexplained stillbirth, miscarriage
7. Previous large baby or babies
8. Ethnicity (some women from certain ethnic backgrounds are at higher risk)
9. Polycystic Ovarian Syndrome

Gestational Diabetes can also occur in women who have none of these risk factors.

Q How is gestational diabetes diagnosed?

A It is recommended that all pregnant women should be tested for diabetes between their 24th and 28th week of pregnancy. Firstly, there is a screening test Polycose. A glucose drink is taken and a sample of blood drawn one hour later.

If the test is high a second test, a Glucose Tolerance Test, is recommended. Depending on these results a diagnosis of Gestational Diabetes is made.
If a woman has significant risk factors she may be asked to skip the Polycose test and go straight to a glucose tolerance test. Some women at high risk may be tested earlier in pregnancy with a HBA1C test done with the first antenatal blood tests.

**Q How is gestational diabetes treated?**

**A** The goal of treatment is to keep the blood glucose within the normal limits to improve the outcomes for both mother and baby. The Diabetes Team consists of a Physician, Obstetrician, Diabetes Midwife, Dietitian, Social Worker and Physiotherapist. They will provide you with information, support and professional.

**Step 1:**

**Meal Plan**

A Dietitian will help you develop a meal plan. This healthy eating plan should be low in fat, no added sugar and high in fibre. The Carbohydrate (glucose making foods) that you eat will be evenly spread over the day. This will result in smaller rises in blood sugar after meals and make good use of a limited insulin supply. The meal plan will also provide nutritious choices.

**It is important that you continue to eat healthy amount of carbohydrates as these are essential for your baby’s growth.** The reason for having a low fat eating plan is because when fatty food is digested, the fat that enters the blood stream can also interfere with insulin action and worsen insulin resistance.

**This meal plan is healthy eating for the whole family - for life.**
Being physically active helps the body control the level of glucose in the blood stream by helping insulin to work properly. Aim to do 30 minutes of moderate intensity activity on most days of the week.

- Walk
- Swim
- Water walk

You will need to monitor your blood glucose frequently. Try to test on waking and then 2 hours from start of eating after breakfast, lunch and dinner. Each blood glucose result must be recorded accurately so that the Diabetes Team can observe any trends and advise on appropriate treatment. Aim for test less than 5.0 mmol/L before breakfast and less than 6.0 mmol/L 2 hours after the start of each meal. We may ask you to aim for even lower levels depending on individual risk factors.

Q Will I need to have further treatment?

A For some women, diet and exercise is not enough to achieve normal blood glucose levels. In such cases tablets such as metformin or insulin injections are needed. The treatment is stopped after the birth of your baby. Your Diabetes Team will follow your blood glucose results to see if further treatment should be part of your plan. We will give you further extra information about treatment options if we think that you may need it.
Q How will gestational diabetes affect my pregnancy?

A Women with GDM are considered to have “higher risk pregnancies.” This means you have a greater chance of developing complications:

1. **Pre-eclampsia** (Toxaemia) this is a condition that only occurs in pregnancy. It can include high blood pressure, protein in your urine and swelling of your hands and feet. You and your baby can become unwell, so we monitor women with preeclampsia closely, usually in hospital.

2. **Polyhydramnios** involves the production of too much Amniotic Fluid – the fluid around your baby. Extra fluid causes discomfort and can lead to preterm birth.

3. There is an increased risk of needing a **Caesarean Section** if the baby grows too big.

4. **Induction of labour** (IOL) may be recommended prior to your due date.

If blood glucoses are kept within the normal range, the risk is reduced and a straightforward pregnancy and birth is more likely.
Q Will gestational diabetes affect my baby?

A Most women with GDM who follow recommended treatment have healthy babies. If your blood glucose levels are maintained within the normal range you can rest assured that you are doing all that is possible for your baby’s health.

Some women with GDM are at higher risk of their baby developing problems. The most common is that of a large baby, which happens as a result of high blood glucose levels in the mother being transferred to the baby in the womb. The baby has to produce large amounts of insulin of its own to deal with the high glucose levels. This extra glucose is stored in the baby’s body as fat and the extra insulin acts as a growth stimulus.

Babies who have high insulin levels can become unwell in late pregnancy, so for women whose blood sugar levels remain high we worry about the baby’s wellbeing. Because of the extra insulin made by the baby’s pancreas, newborns may have very low blood glucose levels after birth and may also have a higher risk of breathing problems and jaundice. We will check your baby’s blood sugars after birth.

Hospitals are well equipped to handle any problems, if they happen, but good blood glucose control is the key to avoiding these problems.

Q Will my baby have diabetes?
A Your baby will not be born with diabetes. But diabetes tends to run in families, so your child may develop diabetes later in life. We are learning more all the time about how the baby’s surroundings before birth, affects the baby after it is born, even right through to being an adult. Keeping good sugar control during pregnancy may reduce the chance of your baby developing later obesity and diabetes.

Babies born to mothers whose blood sugars remain high in pregnancy become children who have increased risk of obesity and later on, Type 2 Diabetes. You should encourage your child to have a healthy diet and have regular exercise and maintain a healthy weight to reduce this risk.

Q Will I have diabetes after the baby is born?

A After the baby is born there is a strong chance that your diabetes will disappear.

It is very important to have a follow up HbA1c at 10-12 weeks after you give birth. Your GP will follow up this result.

There is, however, a chance that you will develop diabetes at a later stage in your life. At National Women’s Health 25 – 30% of women with GDM have pre-diabetes when tested 3 months postnatally.

As women grow older and particularly if they increase their weight, diabetes can develop. We recommend annual screening with your GP for this. The risk of developing diabetes can be lowered by eating a healthy diet, enjoying regular exercise and maintaining the correct weight for your height.
Q If I have another pregnancy will I develop gestational diabetes?

A Yes – you will more than likely develop GDM with all other pregnancies. With your early pregnancy booking bloods your doctor or midwife will ask for an HbA1C, which is elevated in women who have high sugar levels. A referral will then be made to the Diabetes Clinic. If the HbA1C normal, it is important to have a Glucose Tolerance Test between 24 – 28 weeks, or earlier if other signs suggest GDM is developing.

If you lose weight between pregnancies and keep your weight in the normal range for your height you will reduce the risk of Gestational Diabetes in subsequent pregnancies but will still need to be tested for gestational diabetes.

Q What do I have to know to increase my chances for a healthy pregnancy and baby?

A The following list of items should be discussed with your Physician, Obstetrician, Midwife, Diabetes Midwife, and Dietitian.

- How and when to test your blood glucose and how to interpret the results
- What and when to eat, how to prepare meals that maintain good nutrition and normal weight
- Why and when special tests are necessary
- The importance of monitoring baby’s movements
- How to care for yourself after the baby is born to decrease your risk of developing diabetes
- It is recommended that you have a follow-up HBA1C 10-12 weeks after the birth of your baby.

*Please contact your GP for the result.*
Useful Definitions/Notes
The National Women’s Health website has good, accurate and up to date information which you may find helpful.

nationalwomenshealth.adhb.govt.nz

Other great websites to check out:


Resources

https://www.healthpoint.co.nz/download,293891.do

Women’s Health,
Diabetes Clinic,
Auckland City Hospital
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