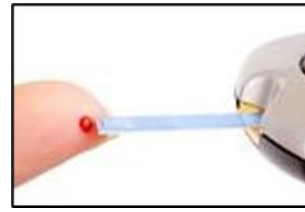
Maternity Unit
Frimley Park & Wexham Park Hospitals

NHS
Frimley Health
NHS Foundation Trust

Gestational Diabetes in Pregnancy



Information for women, relatives and carers

Committed to excellence | Working together | Facing the future

Introduction

This leaflet aims to give you an overview of what is meant by 'Gestational Diabetes Mellitus' (GDM), how it may affect you and your baby and how your pregnancy will be managed in order to have a healthy pregnancy.This leaflet may not cover everything, but please feel free to ask any questions you may have.

What is Gestational Diabetes Mellitus (GDM)?

This is usually a **temporary** form of diabetes that occurs during pregnancy, up to 90 % women will recover after the delivery of the baby. Diabetes in pregnancy is a result of a insulin resistance (inability of the insulin hormone to work effectively) and the inability to increase production of insulin when the demand increases in pregnancy. The diabetes test is only offered to women with risk factors identified at your booking appointment or during the course of your pregnancy.
The reason for you to have a test could be any of these :

- your body mass index (BMI) is higher than 30
- you have previously given birth to a baby weighing 4.5 kg (10 lbs) or more
- you have had gestational diabetes before
- you have a parent, brother or sister with diabetes
- your family origin
- developing macrosomia, polyhydramnios or glycosuria during your pregnancy
- you are taking medication for your physical or mental health which increases the chance of developing gestation diabetes

How is Diabetes going to affect my baby?

When you are diagnosed with GDM your pregnancy will be considered as high risk . Uncontrolled diabetes can affect your baby and the outcome of the pregnancy:

- **Macrosomia (Increased fetal weight)**

When extra glucose from mother croses the placenta, the baby produces more insulin to deal with this. The increased insulin will promote growth and will convert the extra glucose to stored fat, making your babys weight larger than normal.

- **Polyhydramnios (Increased amniotic fluid)**

When the baby receives more glucose, they pass more urine which increases the amniotic fluid around the baby.This can increase your risk of having a preterm delivery,waters breaking early or heavy bleeding after delivery.

- **Jaundice**

Most newborn babies have jaundice and their skin will look slightly yellow or suntanned. For most babies jaundice is harmless and nothing to worry about but occasionally it needs to be treated in the hospital using special lights. This is called phototherapy.

- **Breathing Issues (Respiratory Distress Syndrome)**

Occasionally the baby may be breathing too fast and may start to make grunting sounds at birth, this is because when babies produce too much insulin to process the extra glucose, it stops the production of surfactant in the lungs (lining of the lungs) which helps with gas exchange when born. If the lungs fail to produce sufficient surfactant their breathing can be laboured at birth. It usually gets better by itself within 24 hours.

- **Low Blood Glucose (Neonatal Hypoglycaemia)**

This may occur in the baby soon after birth. In your womb, your baby's insulin production may have been increased caused from raised maternal level of blood glucose. After the birth, the baby no longer has access to maternal glucose, which has previously been transferred across the placenta. This means the baby's increased level of insulin will continue to work but on its own blood glucose and cause levels to drop below normal, resulting in hypoglycaemia. It may take a few days for feeding to be fully established, this leaves your baby vulnerable to low blood sugars. You will be advised to feed your baby as early as possible (ideally within the first hour of birth) to help prevent the baby's blood glucose from dropping. After 48 hours the baby will usually be able to regulate its own insulin back to normal levels. Breastfeeding can help your baby avoid hypoglycaemia and harvesting your colostrum from 36 weeks of pregnancy is advised. **Your baby will not have diabetes when born**.

- **Additional Risks**

Although these are less commonly noticed there is also an increased risk of preterm labour, fetal growth restriction and chance of stillbirth

late in pregnancy although the risk is very small. Good blood sugar control minimises these risks.

Your health care team

During your pregnancy you will be cared for by a team that has specialist knowledge and experience of diabetes in pregnancy.

- You will receive routine antenatal care from the Obstetricians (doctors who look after pregnant women) and Diabetes specialist midwives.
- In addition you might receive diabetes care from a Diabetologist (doctors who look after people with diabetes), a Diabetes specialist nurse and a Dietitian.
- You will be seen every 1-4 weeks depending on your blood glucose levels and be offered telephone support in between.

Most of your visits will be at the hospital antenatal diabetic clinic however it is advisable to stay in contact with your community midwifery team and general practitioner (GP).

Managing Gestational Diabetes
So what happens now?

The key to all the care for women with diabetes in pregnancy is getting the blood glucose levels under control. This requires blood glucose monitoring and a healthy diet.

How to achieve control of your blood glucose levels

During your pregnancy your goal is to keep your blood glucose under control. This means keeping your blood glucose as close to normal as possible. You can achieve this by:

- Changing your diet
- Taking some exercise
- Monitoring your blood glucose levels
- Consider the use of metformin and/or insulin if diet alone does not control your blood glucose

How can I monitor my diabetes?

You will be shown how to monitor your blood glucose levels by pricking your finger **4 times a day.** You will be given a glucose meter to perform the tests and either a written diary or app diary to record the results. You will be asked to test your blood sugar before breakfast and one hour after each meal.

Your blood glucose monitoring results form the basis of your diabetes management, it is important they are always carried out and recorded accurately. Please feel free to ask for help if you are having any problems.

Targets

The targets you will be aiming for are:

- a blood sugar below **5.3mmol/L** before breakfast
- a blood sugar below **7.8mmol/L** one hour after each meal

If you have 3 readings (in a week) above these targets it is advisable to contact the Diabetes specialist midwife or nurse (see contact details at end of leaflet).

Dietary advice for gestational diabetes

You will find information on managing gestational diabetes with diet on our website in the maternity video section or by following the link below: Gestational Diabetes Video - Frimley Health.

If you are cared for at Wexham Park Hospital you will also be offered a virtal live group session with a Diabetes Specialist Dietitian and following the session if you need further support telephone consultations can be arranged on request.

Exercise

Regular exercise is important for blood glucose control. It also improves weight control and general good health during pregnancy. As long as your pregnancy is uncomplicated, there are a number of activities you can do such as brisk walking and swimming. A 30 minutes every day is advised .
Before you start any exercise program you should talk to your doctor or midwife.

Metformin

Sometimes, despite eating a healthy diet and taking exercise, your blood glucose levels can remain high and it may be necessary to start on diabetes medication. Metformin is a tablet which helps regulate blood glucose levels by allowing the insulin produced by the body to work more effectively. It improves insulin resistance and does not cause low blood sugars. It is started at a small dose and slowly increased depending on blood sugar readings. Sometimes it can cause side-effects such as bloating, nausea or flatulence. If this is a problem then please let your diabetes team know.

Insulin

If you have high readings not managed by metformin, or unable to tolerate metformin, it may be necessary for you to have insulin injections. Insulin is administered by an insulin pen; this is a simple device that delivers the correct dose of insulin suggested by the diabetic team. This extra insulin will help to lower your blood glucose and assist in maintaining your baby's normal growth and development.
If you are started on insulin in your pregnancy, and will be taking the insulin for more than 3 months, then you will need to inform the DVLA if you drive as it could make your blood sugar levels go low and precautions will need to be made when driving.

What other special tests will I need?

To make sure that your pregnancy is progressing normally and to check the health of your baby, we suggest a number of extra tests.

- **HbA1c (Glycosated haemoglobin) - Blood Test.**

This blood test will tell us what your average blood glucose level has been for the past 3 months

- **Ultrasound**

You will be offered monthly ultrasound scans from 28 weeks of pregnancy. These scans will monitor your baby's growth and the amount of fluid around the baby. If there are concerns over the baby's growth or fluid volume the scan will be performed every fortnight.

When will my baby be born?

We advise a hospital birth on the Labour Ward for women with gestational diabetes, so both mother and baby may be carefully observed, this can help to identify and avoid any potential complications after the birth.

It may be necessary for you to be induced towards the end of your pregnancy. This will be discussed during your antenatal visits to the clinic. There is separate leaflet about induction of labour, which describes what happens in more detail (available online: Induction of Labour Leaflet - Frimley Health and Care).

If you only needed dietary adjustment and do not require insulin, your risks are low and your pregnancy will be able to continue in the usual way. You will be offered a date for induction of labour before 41 weeks.

If you are taking insulin injections you are usually offered induction at 37-39 weeks. The exact timing depends on your blood sugars, your insulin requirements and the growth of the baby. This will all be assessed in the diabetic antenatal clinic and discussed with you.

When you come into hospital please bring in your blood glucose-testing machine with the test strips and lancets, any medication you are prescribed and hypoglycaemia 'hypo' treatment if appropriate.

After the birth

Your baby will have their blood sugar checked within 4-6 hours of birth on a minimum of a couple of occasions; this is a simple blood test. You and your baby will stay in hospital for a minimum of 24 hours following birth.

If you have been treated with insulin or metformin during the pregnancy this will stop as soon as you give birth. You will be asked to check your blood sugar for the first 24 hours after birth; Aim for targets below 7 mmol/l pre meal and 6-10mmol/l one hour post meal.

Can I breastfeed my baby?

Early breastfeeding is encouraged to assist in maintaining the baby's blood glucose levels. Breastfeeding provides the best form of nourishment for your baby; it also assists in passing your immunity to your baby.

Colostrum Harvesting

This early breast milk is perfectly tailored for your own baby's immune system and can be expressed from 36 weeks. The breast milk expressed can be frozen, ready for your baby after birth, should they need it. We recommend colostrum harvesting for all women and in particular for women with special circumstances, such as gestational diabetes, twins, planned caesarean section, cleft lip or palate. Please discuss your individual needs with your midwife. There is separate leaflet about colostrum harvesting, which describes what happens in more detail

Mental Wellbeing and Diabetes

Being diagnosed and treated for gestational diabetes affects different people in different ways. Some women seem to take it in their stride, while others find it very difficult. GD can change your pregnancy experience overnight. Some women feel anxious about the potential complications or the long-term impact of gestational diabetes. Others feel worried about the diagnosis affecting their birth plan.
Try to remember that most women who develop gestational diabetes have healthy pregnancies and healthy babies if their condition is diagnosed and carefully managed. You'll also have extra care during your pregnancy and labour from your specialist team who you will see regularly. Don't be afraid to ask any questions. It's important that you

understand what you need to do during your pregnancy to keep the condition under control.

If you are feeling overwhelmed, it may help to talk to someone. Try to share your feelings with someone close to you, such as a partner, friend or relative. Remember that gestational diabetes is common - you may even know someone who has had it before who you could talk to. Speak to your specialist diabetes team who can also refer you to NHS talking therapies service, you can also self refer to this service if you prefer.

What about the future?

It is important you have a follow up fasting glucose test 6 -13 weeks after the birth of your baby to exclude diabetes. This will be done at your GP surgery. You will receive a letter asking them to perform the test.

Approximately 35-50 % of women with gestational diabetes will develop Type 2 diabetes within the next 5 years. Type 2 diabetes is the most common form of diabetes, it is caused by the body not producing enough insulin or not using what it produces effectively.

What can I do to minimise the risk of developing type 2 diabetes?

To minimise the risk you should:

- Continue with the healthy eating plan you have been following during your pregnancy.
- Achieve and maintain a suitable body weight
- Exercise regularly

Future Pregnancies

Having developed diabetes during your pregnancy you do have a 50% chance it will re-occur in future pregnancies. Maintaining an ideal weight can reduce this risk. You will be asked to have a glucose tolerance test as soon as possible after booking and further GTT at 24-28 weeks if the result of the first test result is normal.

Telling your Doctor

It is important that your local GP is aware that you have had gestational diabetes as they will arrange for you to have an annual blood glucose test, to help detect the early signs of developing diabetes.

Questions

We welcome any questions now or during the pregnancy. No question is thought to be too small or insignificant to ask, if it is worrying you it has probably worried someone before you. By working together with you to control your sugars through diet, exercise and glucose monitoring we can make this pregnancy a safe, happy and successful time for you and your family.

Further Information / Support Groups:

Diabetes UK – Gestational Diabetes – Careline 0345 123 2399
https://www.diabetes.org.uk/diabetes-the-basics/gestational-diabetes

Frimley Health and Care – Maternity – Gestational Diabetes -
https://www.frimleyhealthandcare.org.uk/maternity/your-pregnancy/pregnancy-complications/gestational-diabetes/

Gestational Diabetes UK - https://www.gestationaldiabetes.co.uk/

NICE –Diabetes in Pregnancy Guideline – www.nice.org.uk

Contact Diabetes Specialist Midwives at

Frimley Park: 0300 613 4880
Wexham Park: 0300 615 4512

For a translation of this leaflet or for accessing this information in another format:

Please contact (PALS) the Patient Advice and Liaison Service on:

Frimley Park Hospital
Telephone: 0300 613 6530
Email: fhft.palsfrimleypark@nhs.net

Wexham Park & Heatherwood Hospitals
Telephone: 0300 615 3365
Email: fhft.palswexhampark@nhs.net

Frimley Park Hospital	**Heatherwood Hospital**	**Wexham Park Hospital**
Portsmouth Road Frimley Surrey, GU16 7UJ	London Road Ascot SL5 8AA	Wexham Slough Berkshire, SL2 4HL
Hospital switchboard: 0300 614 5000		**Website:** www.fhft.nhs.uk

Title of Leaflet	Gestational Diabetes in PregnancyV7.0				
Author	A Anil-Mathew, S Barker, & K Stone		**Department**	Maternity	
Ref. No		**Issue Date**	Nov 22	**Review Date**	Nov 25

Legal Notice

Please remember that this leaflet is intended as general information only. We aim to make the information as up to date and accurate as possible. Please therefore always check specific advice or any concerns you may have with your doctor.