Gestational diabetes

Gestational diabetes is diabetes found for the first time in pregnancy. This means that, at times, you have raised levels of glucose in your blood (called hyperglycaemia) and the condition is caused by your pregnancy. This condition is usually temporary and it should go away after you give birth to your baby. This leaflet will give you information about gestational diabetes and outline the care that you can expect during your pregnancy and after your baby is born.

Why does it happen?

The food you eat includes a group called carbohydrates, and in this group are sugars, and starchy carbohydrates like pasta, rice, cereals, potatoes, bread and chapattis. When you eat, your digestive system breaks down carbohydrate into glucose which enters the bloodstream, to be transported to all the cells in the body, and used as fuel. Your body also produces a hormone called insulin and this acts as a key to allow the glucose in your bloodstream to enter the body cells.

In pregnancy, you may not be able to make enough insulin for your growing needs. Also, the hormones produced by your body to maintain the pregnancy can act as a barrier to insulin, meaning that you become 'insulin resistant'. This means that your insulin has difficulty acting as a key to let the glucose into the cells. Insulin resistance can also occur when you are overweight. Some ethnic groups have a higher incidence than others of gestational diabetes.

Why is this important and what are the risks?

When your blood sugar is continually high, then your baby will be affected by those high levels and its growth and development can be adversely affected. We know from scientific evidence that good control of blood sugars (also known as glycaemic control) during pregnancy can reduce the risk of the following:

- Large baby (this is called fetal macrosomia).
- Difficulty delivering babies' shoulders leading to trauma to both mother and baby (this is called shoulder dystocia).
- Early induction of labour and its possible failure, which could lead to a Caesarean birth.
- Low blood sugar in a newborn baby (this is called neonatal hypoglycaemia).
- Loss of a baby in the days and weeks around delivery (this is known as perinatal death).
- Obesity in the baby in later life.

What happens now?

Your care will be managed by the team headed by a consultant obstetrician who specialises in caring for pregnant women who also have diabetes. Diabetes specialist midwives or care assistants will explain the condition to you, give information about healthy eating and exercise, teach you to how to use a blood glucose monitor and record your blood glucose levels, and plan the appropriate schedule of care for you. If you need any medication, they will support you as well. Gestational diabetes usually starts around 24- 28 weeks of pregnancy but can occur earlier. You will also be offered additional ultrasound scans to assess the growth of your baby from 28 weeks. This information is very useful in planning any treatment you may need and the timing and mode of delivery.

Our aim in managing your care is to keep your blood sugars as near as possible to those of a non-diabetic person and that means a before meal reading of 3.5mmol/l -5.9mmol/l. You will be given support to achieve this by the diabetes team at the hospital and your care will be regularly reviewed. Some of your care will be by telephone directly with the diabetes midwives, and some with midwives, doctors and ultrasonographers in the clinic. Together we aim to work with you to achieve a healthy and successful pregnancy.

http://www.diabetes.org.uk/Guide-to-diabetes/Food_and_recipes/The-Glycaemic-Index/ and also http://www.the-gi/diet.org/lowgifoods.

Treatments (diet, metformin, insulin)

The first and most important line of treatment is with diet and exercise. The diabetes specialist midwives will have discussed diet with you. A low glycaemic index (low GI) diet can be very helpful in reducing your blood glucose. Useful links for information regarding low GI diets can be found at the end of this leaflet.

Exercise is very important for your health generally and particularly when you are known to have raised blood glucose levels, as it will help to control them. If you have not exercised prior to becoming pregnant, then you can begin with short sessions of no more than 15 minutes each, three times a week, building up to 30 minute sessions at a maximum of once per day. This needs to be done gradually. Exercise such as walking and swimming is very beneficial. You will be given information on exercise in pregnancy [(3)] by the diabetes specialist midwives.

About 10-20% of women will not be able to control their blood glucose with diet and exercise alone and will be prescribed medication to bring the levels down. The medications used in this hospital are a tablet called metformin, and injections of insulin. If you need treatment, then you will be given more detailed verbal information and the appropriate information leaflets at that time. All treatments prescribed are safe to use during pregnancy.

The birth of your baby

Your pregnancy will be managed by a multidisciplinary team consisting of a consultant obstetrician and diabetes specialist midwives. Gestational diabetes can cause your baby to become bigger than they would have if you did not have diabetes, so we will monitor baby's growth carefully. We know that if the pregnancy continues too far beyond your due date, then we can encounter problems at delivery due to baby's increased size, and so at around 38 weeks of pregnancy we will work with you to put a plan together for the birth of your baby. Typically, mothers give birth a few days after their due date, but this will be

decided with you on an individual basis according to the clinical picture at the time. Where clinically indicated, our intention will always be to support you in giving birth vaginally. If you do not go into labour naturally then you will be offered an induction of labour at the appropriate time. We aim for your baby to be delivered by your due date plus 6 days at the latest. With your agreement this would involve admission to hospital, monitoring of you and your baby, the possible use of a hormone pessary to prepare your cervix, breaking your waters (also called amniotomy) and the use of a hormone drip (Oxytocin) to bring on your contractions. If an induction is unsuccessful, or there are other reasons why a vaginal birth is not the appropriate, then a Caesarean birth will usually be the next step. Caesarean births will only be undertaken if clinically indicated. We will talk with you and give you written information about different ways of giving birth nearer the time.

Giving birth and the management of blood glucose

During labour and birth, your blood glucose will be closely monitored. If it begins to rise then the frequency of monitoring may be increased and if the trend continues upwards, you may then need an intravenous drip that contains insulin and glucose in order to control you blood glucose levels. This is called an intravenous variable rate insulin infusion but you may hear it referred to as a ‘sliding scale’. This will be stopped after you have given birth to your baby.

After you have given birth – your care

Your blood glucose will be monitored for about 24 hours after baby is born. Please bring your blood glucose meter and sharps box to hospital with you. Your blood glucose levels will be reviewed by the midwives on the postnatal ward and your follow up care will be planned. In the vast majority of cases of gestational diabetes, the levels return to normal within 1 or 2 days. If you have required treatment with metformin and/or insulin, then this will also be stopped once you have given birth and your blood glucose levels monitored. Occasionally, a woman is diagnosed as having gestational diabetes extremely early on in the pregnancy. It is quite likely that they had pre-existing but undiagnosed Type 2 diabetes. Again, the management would be to observe blood glucose levels postnatally and plan your care accordingly.

After you have given birth – baby’s care

Your blood glucose levels are carefully managed in the run up to the birth of your baby. This is in order to reduce the risk of your baby having a low blood sugar (hypoglycaemia) soon after birth. You will be encouraged to put your baby to the breast as soon as you are able to. Skin to skin contact after the birth of your baby is a very important part of this process but it is important that baby wears a hat at this time to prevent heat loss to help prevent hypoglycaemia developing. The diabetes specialist midwife will discuss the expressing of colostrum in pregnancy with you; this can be started at 36 weeks. Prior to your baby’s second feed, his or her blood glucose will be tested by a midwife or a nursery nurse. If the level is low, further feeding will be encouraged. Harvested colostrum (5) could be given if the baby is reluctant to latch at the breast. Sometimes, the addition of formula milk as well as breast milk may be necessary, but breastfeeding will always be the most important first treatment. Occasionally, both methods together are insufficient to control

your baby's blood glucose levels and he or she may need admission to the Special Care Baby Unit (Buscot Ward) for treatment with a drip containing glucose.

Postnatal follow up – blood tests

When the midwives care for you on the postnatal ward, they will give you a pathology form to have a blood test taken five weeks after delivery. Most women will have a simple fasting blood glucose test, which can be taken at the GP surgery, and they will get their results from the GP at the usual 6 week postnatal appointment. Some women will be asked to have an oral glucose tolerance test, which is conducted at the hospital five weeks after delivery. These women will be offered an appointment with the consultant, six weeks after the delivery and the results will be discussed at this meeting.

Future risks

As you have had gestational diabetes in one pregnancy you are at increased risk of developing it in a subsequent pregnancy. You will be offered screening at an earlier stage and referred to the diabetes specialist midwives if necessary.

You are also at increased risk of developing Type 2 diabetes – that is diabetes that occurs when you are not pregnant. This can largely be prevented by following a healthy eating plan, taking regular exercise, and keeping your weight to a normal level. Your weight is considered to be healthy if you have a Body Mass Index (BMI) of 18-25. You will find your BMI recorded in your pregnancy health record.

References

1. NICE (2015) Guidance NG3: Diabetes in Pregnancy: management from pre-conception to the postnatal period. London. National Institute for Clinical Excellence. https://www.nice.org.uk/guidance/ng3
2. NICE (2019) NICE Pathways. Gestational diabetes: risk assessment, testing diagnosis and management. https://pathways.nice.org.uk/pathways/diabetes-in-pregnancy
3. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/622335/CMO_physical_activity_pregnant_women_infographic.pdf
4. RCOG (2013) Gestational Diabetes. London. Royal college of Obstetricians and Gynaecologists. https://www.rcog.org.uk/en/patients/patient-leaflets/gestational-diabetes/
5. Expressing colostrum in pregnancy(harvesting your colostrum) https://www.royalberkshire.nhs.uk/patient-information-leaflets/maternity---expressing-colostrum-in-pregnancy.htm

More information is available on the Trust website: www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

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