Diabetes & pregnancy

What is diabetes

Diabetes affects the way your body turns food into energy. When you eat, your body changes food into a sugar called glucose. Glucose is the 'fuel' your body needs for all activities and is needed to help your baby grow. Diabetes makes it difficult for your body to use glucose as fuel. All people with diabetes have the same problem – too much glucose in the blood.

To carry glucose from your bloodstream to your cells, your body uses insulin. This is a hormone made by a gland near your stomach called the pancreas. Diabetes is either caused by your body not making enough insulin, or not being able to use insulin properly. Glucose is then not carried to your cells, so too much stays in your blood stream. If left untreated, high blood glucose can damage your body and be passed onto your baby.

The aim of treating diabetes in pregnancy is to prevent complications for both you and your baby.

For any questions or concerns contact your health care team:

Antenatal clinic:

Community Midwives:

Diabetes specialist:

Types of diabetes

Gestational Diabetes (GDM)

GDM affects 3-5% of all pregnancies. This means that about 1 in 25 women will develop diabetes in their pregnancy. It occurs in women who do not already have diabetes. It often develops later in pregnancy but can happen at any stage, when the body produces large amounts of hormones that help the baby grow. These hormones can prevent insulin from meeting the extra needs in pregnancy, and when this happens your blood glucose levels rise. Women who have had GDM are likely to get it again in future pregnancies.

Will I always have diabetes?

Gestational diabetes usually goes away after your baby is born, but in a few women diabetes does become permanent and it is important that you are tested for this. You are also more likely to develop GDM in any future pregnancies.

Pre-existing diabetes

Most women with diabetes have an uncomplicated pregnancy and a healthy baby. However, there is an increased risk of some problems such a neural tube defects, heart defects, fetal growth problems and stillbirth. Planning your pregnancy, taking the correct dose of folic acid (5mgs), good glucose control and careful monitoring can reduce these risks.

Type 1 Diabetes. Where the body's immune system attacks and destroys the cells that produce insulin.

Type 2 Diabetes. When the body does not produce enough insulin or the body's cells do not react to insulin. This can often be controlled by managing your diet.

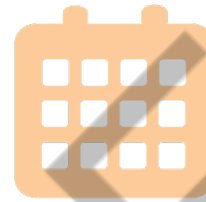
Treatment during pregnancy

If your diabetes is treated with insulin, you may need to change your insulin doses frequently during pregnancy. If your diabetes is treated with tablets, these may be replaced by insulin injections. If you are on diet alone for your diabetes, you may need be started on tablets or insulin or both combined at some stage. If you have type 1 diabetes and are experiencing difficulties with your blood glucose control and insulin doses, your health care team may recommend that you wear a continuous glucose monitor. An insulin pump is a small device that delivers insulin through a length of tubing to a small needle that is inserted into the fat layer of the skin. Insulin is pumped continually at a pre-programmed rate and the pump user programs the pump to give the amount of insulin based on the food that was eaten.

Women with pre-existing diabetes can have an increased risk of retinopathy. Women should therefore be screened regularly in pregnancy

Diabetes in pregnancy

If you have diabetes you will need to be monitored closely to keep you and your baby healthy. You will require more frequent hospital appointments and ultrasound scans to help you keep good control of your blood glucose and check your baby's growth and development.



You will be cared for by a joint diabetes/antenatal team. These health professionals have specialist knowledge of diabetes and pregnancy who work together to care for you and your baby. The team will encourage you to carry out extra blood glucose tests and agree personal targets with you.

Meet the team

Diabetologist or Endocrinologist

These are doctors who care for people with hormone disorders such as diabetes. You may see them after the birth to continue care of your diabetes. They work alongside the antenatal team to monitor your blood glucose and any complications.

Obstetrician/ Maternal Fetal Medicine Specialists

These are specialist doctors who care for women during pregnancy, childbirth and after birth. Your doctor will also be experienced in caring for pregnant women with diabetes. They will monitor you and your baby's health and wellbeing.

Midwife

Will provide care and support to women and families during pregnancy and childbirth. They are able to offer advice on preparing for birth and feeding.

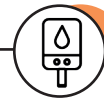
Diabetes Nurse/Midwife

Has specialist knowledge and will work in providing support and education to help you manage your diabetes during pregnancy, birth and after the baby has been born.

Dietitian

Support you with making dietary and activity choices that will help to keep your blood glucose levels within target ranges. They may also give advice about healthy weight gain, eating a balanced diet, caffeine intake and food safety.

How is diabetes treated in pregnancy



Meeting with a dietitian is important: they will guide you on the foods you should eat and avoid in pregnancy and how foods affect your blood glucose levels. You will be asked to test your blood glucose with a meter– you will be taught how to do this. Your medical team will advise you when to test and what readings to aim for. This helps you and your team to know how you are responding to treatment.

Metformin is available as a tablet or dispersible powder. It works by making your body more sensitive to insulin and reduces the production of extra glucose by your liver. Take metformin with or straight after food, to avoid any side effects. Glibenclamide tablets are occasionally used when a woman has significant problems using insulin. It works by stimulating the pancreas to make more insulin. It should be taken with or immediately after food. It is available for women who have GDM and cannot tolerate metformin treatment.

You may need insulin injections if your body is not able to make enough insulin to control your blood glucose levels. You will be taught how to give yourself insulin safely.

Coping with a hypogycaemia
(applicable only if you are treated with insulin or glibenclamide)

If your blood glucose level drops below 4.0mmol/L you may begin to feel unwell – this is called a hypo. It is important to recognise and treat a hypo quickly as it is possible to become unconscious if it is left to drop further. This is not good for you or your baby.

You should always carry something to treat a hypo such as a sugary drink, glucose tablets or gel. After treating your hypo with fast acting glucose, you should eat a carbohydrate snack such as a sandwich, toast or a biscuit.

If you have type 1 diabetes it is advised that friends, family and work colleagues are taught how to treat a severe hypo.

Caring for me and my baby

Make sure you are taking the correct dose of folic acid tablets. Women who have diabetes before getting pregnant need an increased dose of 5mgs which can only be prescribed by a doctor and not bought over the counter at a chemist. If you are not taking the correct dose inform your healthcare team immediately who can prescribe this for you. It is important to take folic acid as it can help prevent your baby from developing birth defects such as spina bifida.

Food and Exercise

It is important to eat a wide variety of foods and regular meals which include some starchy food e.g. bread, chapattis, rice, potatoes and pasta. Your healthcare team will advise you on the daily recommended amount of fruit and vegetables. Eat iron and calcium rich food on a daily basis. Avoid sugar and foods that are high in sugar and keep high fat foods to a minimum. Regular exercise such as walking, swimming and aqua natal classes are important to keep you fit and supple. These also may have a positive effect on lowering your blood glucose levels.

Safe driving

It is dangerous to drive with low blood glucose. Check it before driving. During long journeys stop every 2 hours to test and do not miss or delay meals. It is advised to carry a quick acting carbohydrate snack in the car with you. If you feel symptoms of a hypo while driving-move safely to the side of the road, stop the car, remove the keys from the ignition and move to the passenger seat if it is safe to do so. Check your blood glucose and treat the hypo accordingly. If you have no symptoms when your blood glucose is low you must not drive and tell your specialist team. If you use insulin for more than 3 months you should inform the DVLA.

For more info see www.gov.uk/browse/driving.

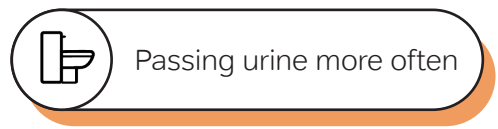
Sick day rules

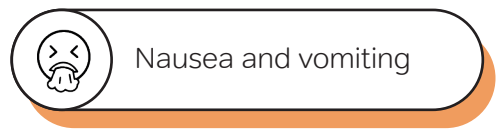
During illness, never stop taking your insulin. Your body is likely to become more insulin resistant during illness, so monitor your blood glucose and ketones closely – every 2 hours as you may need more insulin (this refers predominantly to type 1 diabetics). Your antenatal team will be able to advise you of the best way to increase your quick acting insulin doses when your blood glucose levels are above your agreed target.

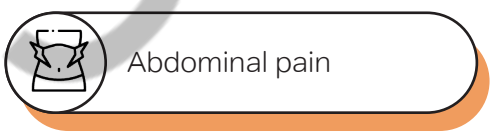
NEVER STOP taking your long acting insulin. If you are unable to eat solids, replace them with liquid foods such a soup, milk or fruit yogurts. Drink sugar free fluids – at least 100mls every hour. If you are not eating, use quick acting insulin to correct high blood glucose readings.

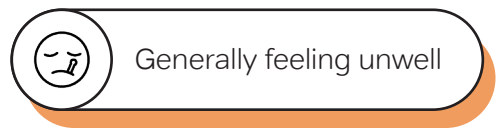
If you have type 1 diabetes your body does not produce insulin and cannot use glucose in the blood. Therefore if the body is starved of energy it will break down fat to use as fuel and this results in ketones being produced. Ketones are acids and can be toxic. A build–up of these acids in the body can lead to a serious condition known as diabetic ketoacidosis or DKA. In pregnancy ketones can develop very quickly even when blood glucose levels are normal only slightly high.

Typical symptoms of DKA are









IF YOU HAVE ANY OF THESE SYMPTOMS CONTACT YOUR MATERNITY UNIT

- Check your blood glucose levels regularly as your healthcare team recommend
- If you are concerned with any readings and are unsure how to act, contact your maternity unit for advice
- Eat a wide variety of foods and speak with your dietitian about what foods are best for your diabetes
- Make sure you are taking the correct dose of folic acid

Symptoms of concern and to seek advice

- Breathless
- Feeling weak
- Abdominal pain
- Shaking
- Generally feeling unwell
- Sweating
- Sickness/vomiting
- Unconsciousness

Additional Information

Diabetes UK Careline – 0345 123 2399

Gestational Diabetes UK – www.gestationaldiabetes.co.uk

NHS Direct – 111

Web: www.perinatal.org.uk E-mail: notes@perinatal.org.uk Tel: 0121 607 0101

perinatal institute
for maternal and child health