Pregnancy and Diabetes

Pregnancy causes the blood sugar (glucose) to go up. Women with diabetes need more treatment and more frequent checks during the pregnancy. Sometimes women who have not had diabetes need treatment for diabetes during the pregnancy. This is called gestational diabetes.

Diabetes in pregnancy can cause many problems for the mother and the baby. However, good treatment and regular checks can help you stay well and have a healthy baby.

It is very important to see your doctor for advice if you have diabetes and want to have children. It is important to avoid unplanned pregnancies if you can. Making sure your diabetes is very well controlled before pregnancy is very important to help you have a healthy baby.

What is diabetes?

Diabetes mellitus (just called diabetes from now on) occurs when the level of sugar (glucose) in the blood becomes higher than normal. There are two main types of diabetes. These are called type 1 diabetes and type 2 diabetes.

For further information about diabetes, also see the separate leaflets called Type 1 Diabetes and Type 2 Diabetes.

Sometimes pregnancy causes the blood sugar to rise in women who do not have diabetes. This is called gestational diabetes (see below).

How does pregnancy affect diabetes?

Pregnancy makes the body need more insulin to control the levels of sugar (glucose) in the body. Therefore women with diabetes usually need more treatments to control their blood sugar when they are pregnant.

If the diabetes is not well controlled during the pregnancy this may cause harm for both you and your baby. Therefore you will need more regular check-ups with a doctor, and to see a specialist during the pregnancy. This will help to reduce the risks and help you to stay well and have a healthy baby.

What is gestational diabetes?

Gestational diabetes mellitus (GDM) is a term for diabetes which starts for the first time during pregnancy. It usually resolves soon after the woman gives birth. Reports indicate that GDM occurs in between 1 in 20 and 1 in 50 of all pregnancies. GDM usually starts in the second half of pregnancy.

The risks of having GDM for you and your baby are similar to those for mothers who have known diabetes, such as difficulties with giving birth and a higher chance of needing a caesarean section (see below). Most women with GDM recover after the pregnancy but there is a high risk of it returning (recurrence) in a future pregnancy. Women who have had GDM are also at increased risk of developing diabetes in the future.

Risk factors

GDM is more common for women at an older age when pregnant, women who are overweight (BMI above 30) and women who smoke. There is also an increased risk for:

- Women who have had GDM in previous pregnancies.

- Where there has been a short time interval between pregnancies.
- Women who have had a previous unexplained stillbirth.
- Women who have had a previous baby with very high birth weight (4.5 kg or more).
- Women with an immediate family member (brother, sister or parent) with diabetes.
- Some ethnic groups (South Asian, black Caribbean and Middle Eastern).

Diagnosis

The oral glucose tolerance test (OGTT) can be used to test for GDM. The current National Institute for Health and Care Excellence (NICE) guidance recommends that:

- Woman who have had GDM in a previous pregnancy should be offered early self-monitoring of blood glucose or a two-hour 75 g OGTT at 16-18 weeks, followed by a repeat OGTT at 28 weeks of pregnancy if the first test is normal.
- Women with other risk factors (see above) should have an OGTT at 24-28 weeks.

Treatment

GDM can cause serious consequences for you and your baby but these can be greatly reduced by treatment.

Treatment includes following advice about diet and physical activity. Medicines to lower your blood sugar (glucose) levels may be required. The medicines may be tablets but insulin injections may also be needed.

After your pregnancy

Insulin and other medicines to control your blood sugar are usually stopped immediately after delivery. Most women with GDM recover after the pregnancy but there is an increased (2 in 3) risk of it returning (recurrence) in a future pregnancy. Women who have had GDM are at increased risk of developing diabetes in the future. It is recommended that women with GDM:

- Avoid being overweight.
- Take regular exercise.
- Don't smoke.
- Try to avoid having pregnancies with only a short time (eg, a few months) between each pregnancy.
- Attend the six-week postpartum check and have a blood glucose test taken.
- Have blood glucose tests checked every year.

What is the advice for women who have diabetes before pregnancy?

The risk of problems for you and your baby can be greatly reduced by the following advice:

- Avoid unplanned pregnancies. It is very important to plan any pregnancy and so contraception is very important.
- Good control of blood sugar (glucose) levels before and during pregnancy reduces the risks of stillbirth, miscarriage, congenital malformation and neonatal death.
- It is essential to follow the dietary advice, weight control and exercise advice given to all people with diabetes.
- Make sure you are regularly checked for any complications of diabetes, including regular eye assessments and other assessments and appointments with your practice nurse, GP or specialist.
- If you are planning to become pregnant then you should take 5 mg of folic acid daily until 12 weeks of pregnancy to reduce the risk of birth defects in your baby.
- Ketone testing strips should be used to test for ketones if you become unwell. Ketones are substances the body makes if there is a lack of insulin in the blood.
- If you smoke then it is even more important to stop smoking before pregnancy.
- Reduce or cut down on the amount of alcohol you drink.
- Think very positively about breast-feeding because it improves blood glucose control and makes it easier to lose weight after giving birth.

What are the risks of having diabetes during pregnancy?

There are various complications that may occur. Pre-conception care and good blood sugar (glucose) control before and during pregnancy can reduce these risks.

Problems during pregnancy

- Premature birth: babies are more likely to be born early (before 37 weeks).
- There is an increased risk of miscarriage or the baby dying late in the pregnancy (stillborn).
- Babies tend to be higher birth weight and this may make giving birth much harder. There is an increased risk of your baby become distressed during labour (fetal distress).
- There may be too much fluid around your baby (polyhydramnios).
- You may suffer more infections during the pregnancy and the infections may be severe.
- There is an increased risk of needing to give birth by caesarean section.

Problems for the baby after pregnancy

- Congenital abnormalities are more common.
- Low blood sugar (hypoglycaemia) is common and may be severe.
- Respiratory distress syndrome is more likely.
- Jaundice is more common.
- Birth injury is more likely.
- There is an increased risk of the baby dying soon after birth.

Problems for the mother

- There is an increased risk of problems during the pregnancy, including high blood pressure and blood clots.
- There is an increased risk of the blood sugar being very high (ketoacidosis) or too low.
- There is also risk that long-term diabetes complications may become worse, including eye problems and kidney problems.

What is the treatment?

You will need frequent checks during your pregnancy. It is essential to have regular checks of your diabetes control and checks of your baby. You will also need the checks that all women need during pregnancy. A specialist will be involved to help look after your diabetes and your unborn baby.

It is recommended that women who have diabetes give birth in hospital. There is a risk that your baby may be distressed and it is essential that specialist care is immediately available.

What is the outlook (prognosis)?

Although there is a risk of many problems for you and your baby, frequent checks and good treatment will help to make sure that you stay well and have a healthy baby.

Women with GDM can usually stop taking diabetes treatment soon after giving birth. However, there is a high risk of having GDM in future pregnancies. There is also an increased risk of developing diabetes (all the time and not just during pregnancies) in the future.

Further help & information

Diabetes UK

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Tel: (Careline) 0845 120 2960 (Admin) 0207 424 1000

Web: www.diabetes.org.uk

Further reading & references

- Diabetes in pregnancy: Management of diabetes and its complications from pre-conception to the postnatal period; NICE Clinical Guideline (March 2008)
- Diabetes Information, Guidelines and Data; NHS Diabetes (various dates)
- Diabetes - type 1; NICE CKS, Dec 2010
- Diabetes - type 2; NICE CKS, July 2010
- Vargas R, Repke JT, Ural SH; Type 1 diabetes mellitus and pregnancy. Rev Obstet Gynecol. 2010 Summer;3(3):92-100.
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