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***Type 1 and Type 2
diabetes and
pregnancy
(Detailed information)***

Information for women

**Department of Diabetes
Aberdeen Royal Infirmary**

As a woman with Type 1 or Type 2 diabetes, what do I need to know about pregnancy?

Over 95% of babies born to diabetic mothers are healthy and well. During pregnancy, women are encouraged to take as much responsibility for their diabetic care as possible.

Both mums and infants need very intensive input before, during and after pregnancy. Good glucose control is especially important before and throughout your pregnancy. Ideally your HbA_{1c} should have been stable and as near target as possible (42 to 53mmol/l, 6.0 to 7.0%) for 3 months before considering pregnancy.

We'll offer you an appointment for pre pregnancy counselling at our specialist Combined Diabetic Antenatal Clinic (CDANC). Once you are pregnant, you'll be advised to attend for early review. At the clinic, you may see an obstetrician, diabetologist, diabetic specialist nurse, midwife, dietitian and lab technician.

As a rough guide, we see you every 2 to 4 weeks until you are 28 weeks pregnant, fortnightly until 36 weeks and then weekly until you have your baby.

You can share your home blood glucose monitoring charts with the clinic with a Diasend account, by email or over the phone. Please discuss how you'll do this with the team.

Please be advised that these clinic visits can take 1 to 2 hours as there is a lot to discuss.

We'll give you a copy of the care plan for your pregnancy at your first visit.

During your pregnancy, retinal screening is arranged for you on three occasions. This is because occasionally there can be changes in your eyes during pregnancy which may need to be investigated further.

Your kidney and thyroid function are also monitored.

What about glucose control?

It's important to keep your blood glucose levels within the normal range (fasting around 4 to 6mmol/l and 2 hours after a meal less than 7.0mmol/l) for as much of the day as possible. Try to do this both before you become pregnant and throughout your pregnancy.

Please be aware that this involves very regular blood testing (often over 4 times a day), keeping to dietary recommendations and insulin (usually 4 times a day).

If you have Type 2 diabetes you might need a change to your medication and might be advised to start insulin treatment before you become pregnant, if required, to improve your blood glucose control. Most women with Type 2 diabetes need to take insulin during their pregnancy. Some may manage excellent control with diet and tablets.

What about hypos in pregnancy?

For women with Type 1 diabetes, hypoglycaemia (blood glucose less than 4mmol/l) is common in pregnancy. It can happen more often and be more severe than it was before you were pregnant. You should warn family members of this and let them know how to treat hypoglycaemia.

Symptoms of hypoglycaemia include:

- Sweating
- Anxiety
- Palpitations
- Poor concentration
- Turning pale
- Feeling hungry
- Dizziness
- Odd behaviour
- Tingling of the lips or fingers
- Headache.

During pregnancy, women can find that their warning symptoms of hypoglycaemia become more difficult to recognise. This might mean you can't drive temporarily. Please discuss this regularly with your diabetes team.

How to avoid hypos

Eat regularly

Missed or late meals are the most common cause of hypos.

Testing your blood glucose

Test at least 4 times a day and adjust your food intake or insulin levels as advised by your care team.

Avoid spending long periods alone

Make sure you are in regular contact with people during the day and that you are not alone overnight if possible.

Carry your hypo treatment (such as dextrose energy tablets, fruit juice or jelly sweets)

Carry one of these at all times and tell family and friends how to help you. We'll give you a glucagon kit with instructions for your partner or family member on when and how this should be used.

Take care when driving

Check your blood glucose before you drive, carry extra glucose with you and try not to drive before a meal.

What if my tests are high?

If your glucose levels are raised (over 10mmol/l) it's important to monitor your urinary ketones.

Ketones can increase quickly during pregnancy. They can harm your baby as well as making you ill.

Contact Aberdeen Maternity Hospital for advice if you develop ketones. See "How to contact us" at the end of this leaflet for more details.

Please do not hesitate to contact your GP or Aberdeen Maternity Hospital if you are unwell.

Will my delivery be normal?

In Scotland, one third of diabetic women have a vaginal delivery and two thirds have caesarean sections. No matter what type of delivery you have, we'll monitor and maintain your blood glucose closely throughout labour.

In the later stages of your pregnancy we'll discuss delivery with you. You should have your baby in hospital and most will be delivered between 38 and 39 weeks (full term is 40 weeks). We may need to induce labour at this point if it shows no sign of beginning itself.

Once labour is established, you'll need an insulin and glucose drip to keep your blood glucose normal during labour.

We'll monitor your baby continuously during labour. This is usually done by a machine called a cardiotocograph (CTG). You'll have two straps round your abdomen which are connected to the CTG machine which picks up the baby's heartbeat.

All women with diabetes have their babies in hospital with access to a neonatal unit. This is because your baby needs to have regular blood glucose measurements to make sure these are not in the low range.

Will the health of my baby be affected?

Most pregnancies in women with diabetes have a very good outcome. Compared with the population as a whole however, there is a very slightly increased risk of stillbirth and malformations in the infant. By making sure that your blood glucose is controlled as well as possible before and throughout your pregnancy, you can reduce these risks near to the levels for non-diabetic women.

Babies of mothers with diabetes tend to be bigger than other babies. This is sometimes called macrosomia. The blood glucose level of the mother is one of the major factors affecting this growth. This is another reason why it's important to keep your blood glucose as near the normal range as possible.

Will my baby have diabetes?

Compared to non-diabetic women, there's only a very slightly increased risk of your child developing diabetes in later life.

In fact, babies of mothers with diabetes tend to have **low** blood glucose. For this reason, your baby's glucose levels will be monitored around the time of delivery.

What happens after my baby's born?

Generally your experience will be the same as other mothers. You can hold your baby and begin breastfeeding, if you choose to, as soon after delivery as possible.

Babies go with their mums to the postnatal ward following birth and are only admitted to the neonatal unit if blood glucose levels become difficult to maintain.

After delivery of your placenta, your insulin requirements drop dramatically.

- In Type 2 diabetes, if insulin was used temporarily in pregnancy this may be discontinued after delivery.
- With Type 1 diabetes, you'll be kept on a reduced insulin infusion for a few hours after delivery. Once you're eating as usual again, your insulin requirements normally return to pre-pregnancy levels.

Is breastfeeding possible if I've got diabetes?

Yes. Just like for all other women, breastfeeding is recommended for women with diabetes. It provides the best nutrition for your baby and gives extra protection against infection through your antibodies.

Please be aware that breastfeeding can reduce your blood glucose level so you might need to adjust your diet or insulin to prevent hypoglycaemia.

Try keeping a snack nearby in case your blood glucose levels drop during the feed. Following delivery, early breastfeeding is recommended as this helps to prevent low blood glucose levels in the baby.

What happens after I've had my baby?

The information you received during pregnancy will still be helpful following delivery although your insulin requirements will be normally be less.

Please make sure you are safe by taking the precautions for hypoglycaemia and continuing to check your blood glucose and adjusting your insulin accordingly. The diabetes team can support you to do this as you adapt to your role as a mother of a young baby.

How to contact us

If you have any questions about your health or care, you can talk to one of our staff on the numbers listed below:

Antenatal Clinic Aberdeen Maternity Hospital

☎ 01224 552072 ☎

Advice and Emergency Number Aberdeen Maternity Hospital

☎ 01224 558855 ☎

Diabetic Clinic David Anderson Building, Foresterhill

☎ 01224 555700 ☎

Useful websites

NHS Grampian Diabetes website



**Scan this code to go to the NHS
Grampian diabetes website**

www.nhsgrampiandiabetes.scot.nhs.uk

My Diabetes My Way

Provides information on all aspects of diabetes.as well as ability to access your own diabetes information.

 www.mydiabetesmyway.scot.nhs.uk


JDRF Pregnancy toolkit

Link to download JDRF pregnancy tool kit

 <https://jdrf.org.uk/forms/information-and-leaflet-request-form/>

Diabetes UK Information

Pregnancy Information Prescription sheet from DUK

 https://diabetes-resources-production.s3-eu-west-1.amazonaws.com/diabetes-storage/2017-08/0655C%20GP%20Information%20Prescriptions_Pregnancy_v6.pdf

Guide to diabetes and pregnancy

 www.diabetes.org.uk/guide-to-diabetes/life-with-diabetes/pregnancy

UK Government

For more information on diabetes and driving.

 www.gov.uk/government/publications/information-for-drivers-with-diabetes

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Department of Diabetes
Aberdeen Royal Infirmary
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