



## CLINICAL GUIDELINE

# Diabetes, Guidelines for the Management of Diabetes Mellitus during Pregnancy

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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### Important Note:

The Intranet version of this document is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

## **INTRODUCTION**

Type 1 diabetes in pregnancy is a high-risk state for both the woman and her foetus. Rates of miscarriage, perinatal loss and major congenital malformation are increased at least two to threefold.

Type 2 diabetes is becoming more common in this age group and management of pregnancies in people with type 2 diabetes should follow the same intensive program of metabolic, obstetric and neonatal supervision.

## **AIM**

An optimal outcome may be obtained in diabetic pregnancy if excellent glycaemic control is achieved before and during pregnancy. Good pre-pregnancy planning is thus essential. Effective contraception, allowing a planned pregnancy, is therefore important.

## **CONTRACEPTION**

Contraception should be discussed on an individual basis with all women of childbearing age with diabetes. In general, the contraceptive advice for a diabetic woman should follow that in the general population but with the following caveats:

- The combined OCP should be avoided in women with complications or risk factors for vascular disease or over 35 years of age. Progesterone-only preparations may be suitable in these women.
- Women using the intrauterine contraceptive device should be advised that they might be at increased risk of infection.

In women with complications or vascular risk a value judgement must be made which balances the risk of complications with the need to avoid pregnancy. The levonorgestrel releasing intrauterine device (e.g. Mirena coil) may be particularly suited as it is as effective as sterilisation and produces low circulating hormone levels.

## **PRE-PREGNANCY CARE**

Infants whose mothers receive dedicated multidisciplinary pre-pregnancy counselling show significantly fewer major congenital malformations (approximating to the rate in non diabetic women) compared to infants of non-attendees. They also have fewer immediate problems and are kept in special care for shorter periods.

All women with diabetes who are planning a pregnancy should be seen at a Multidisciplinary Clinic involving a diabetologist, obstetrician, diabetes nurse specialist, and dietician. They should be seen with their partners if possible and provided with written information.

- Full medical, obstetric and gynaecological history.
- Check thyroid function.
- Review current medications.
- STOP: ACE Inhibitors, A2 Blockers, Statins. Review anti diabetic medication and likely stop all but metformin and insulin. Women on other agents may need replacement with insulin. Contact the local Diabetes Secondary Clinic immediately as soon as pregnancy confirmed.
- Prescribe Folic Acid 5mg daily for at least 1-month pre conception and for 1st trimester.
- Screen for complications.
- Advice on diet and weight reduction if relevant and strongly discourage smoking and refer to smoking cessation if appropriate.
- Educate on the importance of near normal glycaemia control.

- Instruct partners to recognise and treat hypoglycaemia with glucagon if necessary.
- Support improvements in glycaemic control including access to structured education where appropriate.

Women who are well controlled and free from complications should take 1 month's folic acid prior to stopping contraception and keep a record of periods. Others should spend additional time optimising control and having complications investigated and treated.

Women should perform a pregnancy test if there is a lapse of 5 weeks between periods and contact their Diabetes Specialist Nurse if positive.

## **ANTE-NATAL CARE**

Care should be hospital based, from a multi-disciplinary team. Women generally attend every 2 to 4 weeks until 30 weeks and then every 1-2 weeks thereafter.

## **POST NATAL CARE**

- Insulin requirements fall dramatically after delivery- reduce dose to pre-conception dose.
- In breast feeding mothers reduce this further and encourage higher blood sugars than pregnancy.
- Discuss contraception after delivery (usually prior to hospital discharge).
- All women should be reviewed at the clinic in 6 weeks.

## **GESTATIONAL DIABETES**

The diagnosis of gestational diagnosis is under review at present with differing guidelines from NICE, SIGN and the International Association of Diabetes in Pregnancy Study Groups (IADPSG). Recent evidence supports the view that detection and management of gestational diabetes reduces birth weight and some maternal adverse outcomes such as pre-eclampsia. Dietary management is the key first step in management. All of the above guidelines suggest more extensive screening for gestational diabetes than that currently in place in centres in GG&C- full implementation will require alterations in current services locally.

SIGN 116 guideline currently suggests:

- Screening at first antenatal visit
  - At booking all women should be assessed for the presence of risk factors for gestational diabetes (see table 1).
  - All women with risk factors should have HbA1c or fasting glucose measured.
    - Women in early pregnancy with levels of HbA1c  $\geq 48$  mmol/mol, fasting  $\geq 7.0$  mmol/l, random or two hour  $\geq 11.1$  mmol/l glucose diagnostic of diabetes should be treated as having pre-existing diabetes.
    - Women with intermediate levels of glucose (HbA1c 42 to 46 mmol/mol), fasting glucose 5.1 to 6.9 mmol/l or two hour glucose 8.6 to 11.0 mmol/l should be assessed to determine the need for immediate home glucose monitoring and, if the diagnosis remains unclear, assessed for gestational diabetes by 75g OGTT at 24-28 weeks.
- Screening later in pregnancy
  - All women with risk factors (see table 1) should have a 75 g OGTT at 24-28 weeks.

- **Diagnosis**
  - The adoption of internationally agreed criteria for gestational diabetes using 75 g OGTT is recommended:
    - fasting venous plasma glucose  $\geq 5.1$  mmol/l, or
    - one hour value  $\geq 10$  mmol/l, or
    - two hours after OGTT  $\geq 8.5$  mmol/l.

**Table 1: Risk factors for gestational diabetes**

BMI more than 35 kg/m<sup>2</sup> \*

Previous macrosomic baby weighing 4.5 kg or more

Previous gestational diabetes

Family history of diabetes (first degree relative with diabetes)

Family origin with a high prevalence of diabetes:

- South Asian (specifically women whose country of family origin is India, Pakistan or Bangladesh)
- Black Caribbean
- Middle Eastern (specifically women whose country of family origin is Saudi Arabia, United Arab Emirates, Iraq, Jordan, Syria, Oman, Qatar, Kuwait, Lebanon or Egypt).

\*BMI more than 30kg/m<sup>2</sup> in SIGN currently implemented locally as more than 35 kg/m<sup>2</sup>

**MANAGEMENT**

Women with gestational diabetes should have access to dietary advice from a dietician as well as consideration of treatment with metformin and/or insulin starting either with referral to the local multidisciplinary clinic or under a protocol agreed by that clinic.

Women with frank diabetes by non-pregnant criteria (fasting venous glucose  $\geq 7$  mmol/l, random or two hour  $\geq 11.1$  mmol/l) should be managed within a multidisciplinary clinic as they may have type 1 or type 2 diabetes and be at risk of pregnancy outcomes similar to those of women with pre-gestational diabetes.

**FOLLOW-UP**

Annual fasting plasma glucose or HbA1c should be checked in the community in patients with GDM to detect asymptomatic diabetes and all future pregnancies should be assessed for GDM.

The benefit of exercise and weight loss should be highlighted in an effort to avoid future diabetes.