# Reproductive life planning for women with diabetes

**JOSEPHINE LAURIE** BMed, FRACP
**DAVID McINTYRE** MD, FRACP

**With the rising incidence of pregestational and gestational diabetes, reproductive life planning relies on a key question from every healthcare provider at every medical encounter with women of reproductive age – 'Would you like to become pregnant in the next year?' Appropriate preconception planning and intervention results in a reduction in adverse outcomes for mother and child.**

Diabetes is a chronic and burdensome disease. For women with diabetes in the preconception phase, we propose a shift in focus from chronic disease management to 'having a healthy baby', aiming to engage women with diabetes self-management and their healthcare providers. It is important to temper education and risk counselling with supporting the woman in her desire to experience a normal and exciting life event.[1]

## Preconception counselling

Preconception counselling for women with diabetes should inform the woman and her partner of the potential adverse maternal and neonatal outcomes as a result of suboptimal glucose control in pregnancy. Poor glucose control at conception increases the risk of congenital malformation and, later in the gestation, may cause multiple adverse maternal, fetal and neonatal outcomes.

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Dr Laurie is a Senior Staff Specialist in Obstetric Medicine at Mater Mothers' Hospital, Brisbane. Professor McIntyre is Director of Obstetric Medicine at Mater Health Services, Brisbane; and Head of the Mater Clinical Unit at the University of Queensland, Qld.

Counselling should cover the risks of deterioration in pre-existing maternal diabetic complications, such as retinopathy, nephropathy and neuropathy (when present), and the increased risk of pregnancy-specific complications such as pre-eclampsia, preterm birth and caesarean birth.

Appropriate preconception planning and intervention has repeatedly demonstrated effective (and cost-effective) reduction in adverse outcomes for mother and child.[2-4] With the rising incidence of pregestational and gestational diabetes, maternal obesity and advanced maternal age, the concept of reproductive life planning has been brought into sharp focus.[5]

Reproductive life planning relies on a key question from every healthcare provider at every medical encounter with women of reproductive age (15 to 44 years): 'Would you like to become pregnant in the next year?'[6] The concept of asking 'every woman, every time' has been proposed to improve the low rates of preconception care and reduce the high rates of unplanned pregnancy – estimated at 50%.[6,7] Rather than focusing on just those women planning to become pregnant, we must broaden the focus to include those who may wish to defer or need to delay pregnancy to a more appropriate time and after health optimisation.

Women more likely to seek preconception care include those who: are living with their partner, are employed, are aware of the risk of pregnancy-related complications, have an endocrinologist involved in their care, or have suffered a previous miscarriage.[8]

Targeted education and intervention for women with lower levels of health literacy has obvious efficacy but requires a population-specific and timed approach.

## Contraception advice

Contraception is the cornerstone to reproductive life planning and requires all healthcare providers to be skilled in educating women on appropriate options. For women with pre-existing medical conditions, several resources are available, including the WHO criteria, to guide the clinician on safe and effective contraceptive choices.[9] Long-acting reversible contraception (LARC) methods have been shown to have better efficacy and safety profiles than traditional options. They offer reversibility for younger women and those requiring future fertility, but remain underused. A large cohort analysis suggests that less than half of women aged between 15 and 34 years with a medical condition use any prescribed contraceptive or sterilisation.[10]

Conversely, subfertility is frequently a feature of obesity, polycystic ovary syndrome and type 2 diabetes. Preconception care, including all the aspects discussed below, should be an essential part of the preparation of women with diabetes for any form of assisted reproductive treatment.

## Health optimisation

Health optimisation for women with pregestational type 1 and type 2 diabetes is best delivered in a multidisciplinary setting and includes the following:[1, 11-13]

- documenting use and continuation of effective contraception until optimum $HbA_{1c}$ level is achieved/maintained
- reviewing/re-educating for diet, carbohydrate counting and hypoglycaemic management
- commencing folate supplementation at 5 mg daily
- reviewing whether patient is using the most recent methods of blood glucose testing and insulin delivery
- targeting strict blood glucose control, aiming for an $HbA_{1c}$ level less than 6.5% without severe hypoglycaemia
- screening for microvascular and macrovascular complications, including baseline urinary albumin excretion and formal eye review
- screening for concomitant autoimmune disease in type 1 diabetes – in particular, coeliac disease and thyroid disease
- managing comorbidities – in particular, hypertension, obesity, polycystic ovary syndrome and depression
- reviewing all prescribed and nonprescribed medications – in particular, discontinuation of ACE inhibitors and statins before conception or as soon as pregnancy is confirmed.

## Interconception care

Once the woman gives birth, the postpartum period provides an opportunity to implement interconception care. This includes encouraging breastfeeding, assessing medications for compatibility with lactation (using online resources such as LactMed, www.toxnet.nlm.nih.gov/newtoxnet/lactmed.htm), contraception and medical/lifestyle optimisation to enhance any subsequent pregnancies and improve the longevity and wellbeing of the mother and her family.

**Figure.** Glucose monitoring without blood, using a remote sensor and mobile phone.

## Conclusion

Reproductive life planning should ultimately be a positive experience for women with diabetes and an opportunity to re-engage with their care and carers. Effective timing of conception is key to planning pregnancy, and contraception should be continued (and assisted reproduction delayed) until risk minimisation and health optimisation has occurred.

Women with diabetes and their partners need to be educated on the risks to mother and baby as well as the positive aspect of how those risks can be minimised to allow for a healthy pregnancy. Interconception care provides an opportunity to address lifestyle issues, such as diet and weight gain, to maintain maternal health into the future.

## References

A list of references is included in the online version of this article (www. medicinetoday.com.au).

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