

pregnancy are closely associated with increased risk of adverse outcomes for both mother and baby. For the mother, these include the short term risks of pre-eclampsia, and the possible tripartite associated with giving birth to a large baby, as well as the long term risk of developing diabetes later in life. For the baby, the short term risks include neonatal hypoglycaemia (low blood sugar levels), and the long term risk of being overweight and developing glucose intolerance or diabetes later in life.¹⁰

As the authors of a British Medical Journal 2014 paper point out, separating out the role of gestational diabetes from that of maternal obesity and pregnancy weight gain is very difficult. Randomised controlled trials showed that treating gestational diabetes also had the effect of ensuring the mothers did not gain too much weight. "We need to understand better how these factors interact to increase risks and to manage them, and not assume that lowering minimally raised blood sugar values is of paramount importance."¹²

The risks of diagnosis

A diagnosis of gestational diabetes is associated with an increased risk of unnecessary interventions while offering few benefits to the mother or her baby. A large Canadian study failed to detect any beneficial effects of routine screening on pregnancy outcomes, and a review of the medical literature by the US Preventative Services Task Force reached similar conclusions.¹¹

The results of two major randomised controlled trials evaluating the treatment for gestational diabetes were able to show only minor improvements in birth weight and the prevention of pre-eclampsia, and a small decrease in the relatively infrequent complication of shoulder dystocia, a situation in which the baby's shoulders becomes stuck preventing the baby's body from being born.¹²

A recent Cochrane review published online on 11 February 2014 also found that "it is unclear whether screening for GDM leads to better health outcomes and if so, which screening strategy is the most appropriate."¹³

Additionally, there are costs to the family and the health system of a diagnosis of gestational diabetes. These include extra monitoring, more clinic visits, more ultrasound scans and blood tests, all of which cost the health system and often the mother/family as well, and in addition can cause extra stress, anxiety and guilt for the woman.

A woman who has GDM diagnosed during pregnancy is more likely to have her labour induced, and to give birth by caesarean section, even if she has managed to keep her blood sugar levels under control by dietary changes and the weight of her baby within the normal range.¹⁰

Each intervention in the birth process comes with additional risks to both mother and baby. For example, babies born by caesarean

section are more likely to be hypoglycaemic (have low blood sugar levels at birth), and have an increased risk of becoming obese and of developing type 1 diabetes later in life.^{10,16}

Women need to know there is no medical evidence that mild hyperglycaemia during pregnancy is significantly harmful to mother or baby. They also need to be aware of the debate surrounding screening methods and the lack of clear unequivocal evidence that the diagnosis and treatment of gestational diabetes benefits the mother and her baby in the short, medium or long term.

Minimising the risks

Newly pregnant women need to be made aware of the importance of diet and exercise for the wellbeing of her baby and herself including reducing the chance of being diagnosed with gestational diabetes.

It is also important that women are given accurate information about the consequences of being tested for gestational diabetes, including the risk of overdiagnosis if a single glucose tolerance test is used, and the cascade of interventions that can follow a diagnosis of gestational diabetes.

The authors of the 2014 British Medical Journal paper concluded that all overweight pregnant women should receive basic dietary counselling, and that until further evidence is available the best advice is that only women at risk of having an abnormally large baby undergo the one-hour glucose challenge test, followed by an OGTT test if needed.¹⁰

Informed consent

Before you give consent to being screened or tested for gestational diabetes it is important that you are aware of and understand the risks, benefits and possible consequences of the tests you are being encouraged to undergo. While screening for gestational diabetes has become a routine part of pregnancy care, the definition of this condition has recently been widened and there is now a risk of many pregnant women being overdiagnosed and having more interventions in their labour and birth than would have occurred had they not been labelled as having gestational diabetes. Remember, you have the right to choose whether or not to be tested for gestational diabetes.

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- <http://midwifeinthinking.com/>
- <http://www.birtnaik.org/>
- http://www.health.govt.nz/system/files/documents/publications/screening-diagnosis-management_of_gestational-diabetes-in-nz-clinical-practice-guideline-dec14.pdf

Recommended Reading:

- Sarah J Buckley, Gentle birth, gentle mothering, Chapter 8 Celestial Arts, 2009
- Michael Odent. Childbirth in the Age of Plastics. Pinter & Martin, 2011.



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GESTATIONAL DIABETES

The facts



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The majority of healthy women can expect to have an uncomplicated pregnancy, to begin labour naturally and to give birth to a healthy baby. However, the increasing medicalisation of both pregnancy and birth has resulted in huge changes in women's experience of having a baby.

Women are often unaware that they have the right to be given information on the risks and benefits of every procedure and test they are asked to undergo during pregnancy, and to choose whether or not they will have it.

Over the past few decades pregnancy has become a nine-month obstacle race during which women are faced with making decisions about an increasing number of tests and procedures. Screening for gestational diabetes is one of them.

This pamphlet provides you with evidence-based information about gestational diabetes.

What is gestational diabetes?

Gestational diabetes mellitus (GDM) is defined as an elevated blood glucose (the body's ordinary sugar) that is first diagnosed in pregnancy.⁽¹⁾

Gestational diabetes is usually a mild condition without symptoms that develops in the last few months of pregnancy. It is important to know that mild hyperglycaemia is a normal and important adaptation in pregnancy caused by hormonal changes that ensure that the mother's blood glucose levels stay high enough to continually supply enough of this essential fuel to her growing baby.⁽¹⁾

A diagnosis of diabetes outside of pregnancy is usually due to a problem with ability of the hormone insulin to clear glucose from the bloodstream resulting in a higher than normal blood glucose level (hyperglycaemia). Hyperglycaemia may be caused by an insufficient insulin production or by insulin resistance. If the blood glucose levels get very high or remain higher than normal for many years, damage to the eyes, kidneys, nerves or heart can result. Some women who are first diagnosed with diabetes during pregnancy actually had mild, undiagnosed diabetes prior to becoming pregnant.

When a woman is diagnosed as having gestational diabetes her pregnancy care changes dramatically as her pregnancy becomes regarded as high risk. The cascade of interventions that follows includes daily glucose monitoring, extra clinic visits, additional ultrasound scans, and more obstetric monitoring. She has an increased likelihood of her labour being induced, having a caesarean section, and her baby being admitted to the special care baby unit.⁽²⁾

Screening for gestational diabetes

It is important to know that there is considerable controversy around the tests used to diagnose gestational diabetes and the criteria used to make the diagnosis.

As with most screening programmes, screening for gestational diabetes consists of a screening test followed by a diagnostic test. The screening test involves drinking a high-glucose drink which contains 50 grams of glucose (10 teaspoons of sugar). One hour later a blood sample is taken to measure blood glucose levels.

If the blood glucose levels are high, a diagnostic test called an oral glucose tolerance test (OGTT) is recommended to confirm whether or not the woman has gestational diabetes. This involves an 8-hour fast, a blood sample being taken followed by a glucose drink containing 75g or 100 grams of glucose, and another blood sample being taken two hours afterwards. Many women test positive during the one-hour screening test, but the OGTT shows that fewer than one in five of these women actually has gestational diabetes.⁽³⁾

International agencies have recommended that gestational diabetes be diagnosed by a single OGTT.⁽²⁾ However because of the implications for pregnancy care there are major problems with relying on a single raised blood glucose result for making a diagnosis of gestational diabetes.

A woman's usual diet may affect her response to the huge sugar load required by either of these tests, especially if she does not normally consume much sugar, especially on an empty stomach. In addition, a 50-75gm glucose dose is more of a load for a 60kg woman than a 75-85kg woman.

The advantage of having both tests is that many women will avoid being overdiagnosed as having gestational diabetes when they do not actually have it.

The disadvantages of a single test

Blood glucose values after a single glucose tolerance test are notoriously variable. In a recent paper published in the British Medical Journal it was stated that 40% of pregnant women who had a second glucose test shortly after an abnormal result produced a normal result after the second test. Another systematic review of glucose tolerance testing concluded that "caution should be exercised when interpreting a single test result."⁽⁴⁾



In 2008 the International Association of Diabetes Pregnancy Study Groups (IADPSG) met to decide on what the glucose threshold should be for a diagnosis of gestational diabetes. One of a number of recommendations the IADPSG made was the use of a single test, the OGTT, to reach a diagnosis. These recommendations were subsequently adopted by diabetes associations in several countries, including Australia, France and China. The resulting use of the single test has trebled the diagnosis of gestational diabetes and is a clear example of overdiagnosis.⁽⁵⁾

The HbA1c test

In 2015 the Ministry of Health published its Clinical Practice Guideline on the Screening, Diagnosis and Management of Gestational Diabetes in New Zealand.⁽⁶⁾ The document clearly acknowledges the national and international differences of opinion on the diagnosis and screening of women for gestational diabetes. One of the issues discussed by the Guideline Development Team was the use during early pregnancy of the HbA1c blood test for diabetes.

The haemoglobin A1c test (HbA1c) is a test that measures the average blood sugar levels over the previous 6-8 weeks. It is used to diagnose diabetes and pre-diabetes in the non-pregnant population. The NZ guideline states that there is no randomised control trial (RCT) evidence for screening with HbA1c in early pregnancy in order to detect previously undiagnosed type 2 diabetes, and "no evidence was identified to link screening using HbA1c early in pregnancy with later maternal or fetal outcomes."⁽⁶⁾ Despite the lack of evidence it recommends universal screening using the HbA1c test as part of the first antenatal blood tests that pregnant women are offered.

Treating gestational diabetes

The main goal of treating gestational diabetes is to reduce the birth weight of the baby, as large for gestational age babies, which is an outcome of GDM, are at increased risk of having neonatal hypoglycaemia (low blood sugar levels) and of being overweight in later life.

The advice given to women diagnosed as having gestational diabetes is to exercise regularly and reduce the amount of simple sugars in their diets, replace sugary highly processed foods with fresh whole food and complex carbohydrates that have a low glycaemic index. Regular exercise is also recommended as this helps the body burn up glucose and increases the effectiveness of insulin. A major UK Report found that dietary changes and regular exercise are effective in controlling blood glucose levels for 80%-90% of women with gestational diabetes.⁽⁸⁾

This advice is something that all pregnant women can benefit from, not just those labelled as having gestational diabetes.

Differing opinions on gestational diabetes

While some experts believe that even mild to moderate gestational diabetes is a serious condition, others believe it is a diagnosis looking for a disease.⁽⁹⁾⁽¹⁰⁾ Michel Odent describes how one of the roles of the placenta is to manipulate the maternal physiology for the benefit of the baby. Therefore high glucose levels at various phases during pregnancy may simply reflect the normal influence of placental hormones which keep the mother's blood glucose relatively high so that plenty of this essential fuel is available to her baby.⁽⁹⁾⁽¹¹⁾

Odent and many others have also described how the diagnosis of gestational diabetes can have a profound effect on a woman, changing her from being a happy, pregnant woman into an anxious or depressed one.⁽⁹⁾⁽¹²⁾ The new understandings arising from epigenetics show that fear and anxiety can have a negative lifelong effect on the baby in the uterus.

Rather than labelling maternal hyperglycaemia a disease, it is more accurate and beneficial to regard it as one of a number of risk factors for adverse maternal and infant outcomes. There is strong evidence that maternal obesity and excessive weight gain during