dealing with diabetes

Don't dismiss symptoms such as excessive fatigue, thrush infections and an increase in thirst and urination as normal parts of pregnancy. They may indicate something more sinister

Raphaela Angelou was 26 weeks pregnant when she began feeling unusually exhausted. 'I was more tired than I had felt during the first trimester,' she says. 'At first I put it down to a head cold that I couldn't seem to shake. I had been 46kg before pregnancy; a vegetarian with a healthy diet. Surely gestational diabetes wouldn't affect me?'

Around three to eight percent (up to 20 percent in some ethnic groups) of pregnant women will be diagnosed with gestational diabetes – a result of high levels of glucose in the mother's blood.

This disorder is not something that can be dismissed. If left untreated, there is a higher risk of pregnancy loss, premature delivery, growing a larger-than-normal baby (which can cause injury at delivery) and even death. In addition, abnormal "programming" of the foetus is also significant because of the risk of the baby developing diabetes in later life.

Although these outcomes may be worrisome, there are some simple steps that can be taken to help manage this condition.

INSULIN & DIABETES

Insulin, a hormone produced by the pancreas, is essential for converting glucose (sugar) from foods such as bread, cereal, starchy vegetables, fruit and milk into energy, enabling our bodies to function properly. People with diabetes don't make enough insulin to do this job well so instead the glucose stays in the blood, which is why they have higher blood glucose levels.

TYPES OF DIABETES

There are three main types of diabetes – types 1 and 2, and gestational.

TYPE 1 DIABETES is an auto-immune disorder that results in the destruction of the insulin-producing cells of the pancreas. 'Those with type 1 diabetes must take daily injections of insulin (and ideally test their blood glucose levels several times throughout the day),' explains accredited practising dietitian Natasha Jo Leader. 'Without any insulin, death will result from severe metabolic disturbances. This type of diabetes can occur at any time with about 50 percent of people diagnosed at under 25 years of age and 50 percent at over 25 years of age.'

TYPE 2 DIABETES In those with this type, the pancreas makes some insulin but it doesn't work effectively, usually due to insulin resistance. In other words, the muscles don't respond properly to the insulin present. Generally affecting older adults, and lately an increasing number of children, the risk of getting this type of diabetes is greatly increased in those who are overweight and don't engage in physical activity.

GESTATIONAL DIABETES Pregnant women need two to three times more insulin than normal due to insulin resistance caused by placental hormones. Gestational diabetes occurs if the body is unable to produce this much extra insulin, and is different from having diabetes before pregnancy.

It usually develops late in the pregnancy, at around 24 to 28 weeks, as a result of the changes in the mother's hormones, though it can be diagnosed earlier. It is recommended that all women are screened for gestational diabetes. This is done by having a Glucose Challenge Test (GCT), which involves a patient taking a glucose drink, then an hour later giving blood for a glucose measurement. If the GCT shows abnormalities an Oral Glucose Tolerance Test (OGTT) is carried out, which involves following a diet for three days, an overnight fast then a blood sample being taken both before and two hours after a glucose drink.

Angelou says, 'I was sent for the routine blood glucose test at 28 weeks and thought it was highly unlikely that I would have a problem. To my surprise, I was told the results were high and I had to have a follow-up test. I failed that too. Even my obstetrician was surprised!'

An OGTT is also performed six to 12 weeks after the birth to ensure the blood glucose levels have returned to normal.

Symptoms aren't common but if they are present they can include being thirsty all the time, increased urination, excessive fatigue and thrush infections.

WHO IS MOST AT RISK?

You are at a higher risk of developing gestational diabetes if you:

- are over 30 years of age
- have a family history of type 2 diabetes
- are overweight or obese
- are from an indigenous Australian, Torres Strait Islander, Vietnamese, Chinese, Middle Eastern, Polynesian or Melanesian background
- have had gestational diabetes during previous pregnancies
- have polycystic ovarian syndrome
- have had a previous baby weighing over 4kg.

LONG-TERM EFFECTS

If this condition is left untreated, it can cause serious complications for the mother and baby. For mums, it increases the risk of perinatal morbidity and mortality, so timely detection and treatment can improve the outcome.

The most common problem with babies born to mothers with gestational diabetes is that they grow larger than usual inside the womb. This is due to the baby's need to produce more insulin to be able to cope when exposed to its mother's high glucose levels. Another associated risk is neonatal hypoglycaemia. 'Having a large baby can create the risk of injury at both Caesarean and forceps deliveries, and a need for the baby to be looked after in special care until the glucose

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level stabilises after delivery,' explains President of Diabetes Australia, Dr Gary Deed. 'Also, babies born to mothers with gestational diabetes are at an increased risk of developing type 2 diabetes later in life.' In fact, up to 50 percent will develop diabetes within 10 years of the pregnancy, adds Leader. Other complications may include pregnancy loss and premature delivery.

Angelou says, 'At 38 weeks, I went into labour, was promptly taken to theatre and had an emergency Caesarean – two days before my planned Caesarean. My little girl emerged within 15 minutes and I only had a brief glimpse of her. Her temperature was very low and she was hypoglycaemic. She was taken to special care and fed through a tube into her stomach, then placed in a humidicrib to keep warm.

'She was brought into my room to be fed, but spent most of the next few days in special care. Her sugar levels steadied after the first 24 hours, and after that, she was just observed. My sugar levels were still very high, but they settled over the coming weeks. I had a glucose test eight weeks post-partum, and was cleared of diabetes, but have to have the test repeated annually.'

HOW LONG DOES GESTATIONAL DIABETES LAST?

The diabetes generally disappears when the pregnancy is over and blood glucose levels return to normal. However this experience increases the risk of developing type 2 diabetes later in life. If left untreated, type 2 diabetes comes with its own long-term effects, such as kidney failure, blindness, heart attack or stroke, cardiovascular disease, nerve damage and amputation. To reduce the risk or delay the development of type 2 diabetes, Dr Deed offers the following suggestions:

- Maintain or achieve a healthy weight. Balancing food intake with activity levels is the best way to maintain or reduce any excess body weight.
- Limit saturated fat, processed and fried foods. Choose lean meat, skinless chicken and low-fat dairy foods and eat plenty of vegetables, fruits, legumes, wholegrain breads and cereals.
- Aim to include at least 30 minutes of moderate intensity physical activity on most days. You should discuss your physical activity plans with your doctor prior to starting any exercise regime.
- It is important to have your blood glucose tested every one to two years with an OGTT.

'Having gestational diabetes can come as a shock, and managing it can be quite stressful,' says Angelou. 'You do get through it though, and by having a team of vigilant professionals looking after you both, you are very likely to deliver a healthy baby. I am now conscious of the glycaemic index of foods as well as their sugar content and I'm hopeful that with a good diet, I will not be diagnosed with type 2 diabetes in the future. I will have to be screened carefully early on in any future pregnancy as gestational diabetes is likely to recur. However, looking at my healthy daughter now, I know I'll cope.' ●

RESOURCES

USEFUL CONTACTS

- **bubhub.com.au** Provides a fact sheet on gestational diabetes along with popular forum threads.
- **diabetesaustralia.com.au** For further information on understanding and living with diabetes, and details on campaigns.

TREATMENT STRATEGIES

As we all know, prevention is better than cure, and the best way to steer clear of gestational diabetes in the first instance is to maintain a healthy lifestyle prior to falling pregnant. Once pregnant, eating well, keeping active and avoiding excessive weight gain may also help. If you are diagnosed, there are three simple steps to take towards controlling it:

1 Adopt a healthy eating plan Women with gestational diabetes need to be referred to an accredited practising dietitian (preferably one who specialises in gestational diabetes) for assessment and correct advice on diet.

'They are encouraged to eat smaller amounts and spread out their carbohydrate intake through meals and snacks so as to satisfy hunger while still maintaining a healthy weight,' says Leader.

Affected women should also choose foods which provide the nutrients needed during pregnancy such as calcium, iron and folic acid, and are low in fat, particularly saturated fat, and high in fibre. 'Every morsel and food type had to be considered beforehand. I found cobloaf bread – which was wholegrain and had several different seeds – and wholemeal pasta with omega-3 the types of carbohydrate I could eat. They didn't raise my sugars unduly and provided me with sustained energy,' says Angelou.

2 Increase physical activity For women with gestational diabetes, Leader recommends light to moderate intensity physical activity 30 minutes a day to help to manage blood glucose levels. Regular exercise such as walking not only keeps fitness levels up and prepares you for the birth of your baby, but it also helps to reduce insulin resistance in women who have been diagnosed with gestational diabetes. Women should not greatly increase their activity if they were not previously active.

3 Monitor blood glucose levels 'I was issued with a blood sugar monitor and instructed on how to use the device – four times a day. I was also issued with a journal to record my levels,' says Angelou.

Regularly testing your blood glucose levels is essential so that treatment can be assessed and changed as necessary. Dr Deed says, 'It is important that women monitor their blood glucose levels at home through daily blood tests to check that management of diabetes has the expected effect of normalising blood glucose levels to within the target range advised by a doctor.'

4 Treatment with insulin injections Despite Angelou's healthy lifestyle, her sugar levels kept climbing so she was required to take insulin injections to keep them under control. 'I had to see an endocrinologist and she put me on insulin injections. They had to go into my pregnant stomach – which was unsettling at first – three times a day. I suffered a few hypoglycaemic attacks, which occurred because my levels dropped too low, so I needed to keep lollies close by,' she says. A "hypo" makes you feel faint, light-headed, confused, and can sometimes lead to a seizure and passing out. Leader says this is unusual and generally should not occur if the patient is following their practitioner's advice.

Up to 60 percent of pregnant women need insulin injections because healthy eating and physical activity cannot always control their gestational diabetes adequately.