AgaMatrix®

Advanced Blood Glucose Monitoring

GESTATIONAL DIABETES

From the makers of WaveSense JAZZ™

WHAT IS GESTATIONAL DIABETES?

Gestational diabetes is a form of diabetes that develops around the middle of a pregnancy and is often diagnosed in the second or third trimester. It is usually temporary and goes away after your baby is born.

It is caused by the increase of certain pregnancy hormones which reduce the effectiveness of insulin. Insulin enables the sugar (glucose) in our bloodstream to convert into a source of energy. If insulin is less effective than it should be, the pancreas needs to produce more insulin than normal. The pancreas of a woman with gestational diabetes cannot meet this demand and so glucose levels rise which after time can cause complications.

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WHY ME?

Sometimes there are no obvious reasons or links to being diagnosed, but you are more likely to develop gestational diabetes if you;

- are overweight
- have a family history of diabetes
- are from a South Asian, African-Caribbean or Middle Eastern background
- have already had a baby who weighed 4.5kg (9.5lbs) or more
- have polycystic ovary syndrome (PCOS)
- have had gestational diabetes before

HOW CAN GESTATIONAL DIABETES AFFECT MY BABY?

Large baby (Macrosomia)

If your blood sugar levels are high then your baby will receive more glucose than normal. This causes your baby to grow bigger which can sometimes lead to increased trauma during birth.

Low blood sugar after delivery

Once delivery has occurred the level of insulin your baby has been producing might be too high for their needs once they are independent of you. Your baby's high levels of insulin might cause your baby's blood sugar to drop too low. This is called hypoglycaemia. Your baby's blood will be tested soon after birth and treated if it is low. This should correct itself after a short period of time following treatment.

Stillbirth

There is a very slight increased risk towards the end of pregnancy.

HOW CAN GESTATIONAL DIABETES AFFECT ME AND MY PREGNANCY?

With the right management of your gestational diabetes you may not see any effects. Gestational diabetes does however increase the chance of some complications during the pregnancy and in later life.

- Pre-eclampsia - this is a condition which causes high blood pressure in women during pregnancy. Symptoms include swelling, abdominal pain, headaches, change in reflexes, reduced or no urine output, dizziness, excessive vomiting, nausea and vision changes.
- Premature (early) birth
- Induced labour (started artificially)
- Having to have a Caesarean Section
- Developing Type 2 diabetes in later life
- Developing gestational diabetes in future pregnancies

A good care plan and careful management will reduce the risks to you and your baby.

HOW WILL MY GESTATIONAL DIABETES BE MANAGED?

You will continue to see your midwife but will have additional regular appointments at a specialist diabetes clinic for the rest of your pregnancy to monitor you, your baby and the control of your condition.

Diet alone

Many women with gestational diabetes find that making some changes to lifestyle and diet can make all the difference to their blood glucose control.

Eat a healthy balanced diet and be thoughtful about the carbohydrates you consume. The carbohydrates we eat are converted into glucose and the rate at which this conversion happens varies depending on the type of carbohydrate eaten. There are two forms of carbohydrate;

- **Sugary carbohydrates** found in sweets, soft drinks, fruit, cakes and biscuits are quickly converted to glucose and cause a fast spike in blood glucose.
- **Starchy carbohydrates** found in flour, rice, potatoes and pasta are converted at a slower rate and release over a longer period of time resulting in a more stable blood glucose profile.

Fibre slows down the conversion of carbohydrate to glucose so choosing foods with higher fibre content such as brown rice and wholemeal pasta and bread over the white variants will help.

Fat also slows down the conversion rate of carbohydrate to glucose although fat should only be eaten in moderation as part of a balanced diet.

Fibre and fat content are related to Glycaemic Index (GI). A low GI diet is a healthy choice for everybody, not only people with diabetes. A low GI diet has shown to improve blood glucose levels in people with diabetes and can help to control weight as it helps to delay hunger and reduce appetite.

GI is the ranking on a scale of 0 - 100 on the rate at which blood glucose rises. Low GI food will raise blood glucose levels slower and without the peak experienced with high GI foods. Glucose itself has a GI of 100. Below are examples of food products and their corresponding GI levels.

GI Values of Certain Foods

	Low		Medium		High	
Breakfast Cereal	All-Bran™	42	Special K™	69	Cornflakes	93
Bread	Chapati	50	Granary Bread	62	White Bread	72
Vegetable	Brocolli, boiled	45	Beetroot, boiled	64	Parsnip, boiled	97
Fruit	Cherries	22	Banana	52	Melon	72
Snack	Peanuts	14	Low Fat Potato Crisps	54	Plain Popcorn	72

For information on more food items, visit http://www.diogenes-eu.org/GI-Database/Default.htm†

Medication

If you are struggling to keep good control of your blood glucose levels with lifestyle and diet changes alone, your healthcare professional may feel the need to prescribe you tablets, insulin or both. These medications are not harmful and are often used in pregnancy. In most cases the medication can be stopped after delivering your baby. Your healthcare team will give you a full explanation and training on your medication regimen.

Exercise

Exercise is helpful at reducing blood sugar. Be sensible and exercise gently and frequently. If you weren't active before you became pregnant, don't suddenly take up strenuous exercise, start with walking. As a general rule, you should be able to hold a conversation as you exercise when pregnant. If you become breathless as you talk, then you're probably exercising too strenuously. Consult your healthcare team when embarking on a new exercise regime.

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TESTING YOUR BLOOD GLUCOSE

Once diagnosed with gestational diabetes it is highly likely you will be given a home blood glucose monitor and shown how to test your blood sugar levels.

Testing your blood regularly will give you the best picture of the impact different foods have on your blood glucose levels. Your healthcare professional will give you guidance on when and how often to test. You will also be given a blood glucose target range, possibly more than one for different times of day.

WHAT WILL HAPPEN AFTER GIVING BIRTH

After giving birth, most women with gestational diabetes find their blood glucose levels return to normal. You will have your blood tested after birth and in most cases again, 6-12 weeks later, either at your GP surgery or at the specialist diabetes clinic.

Your baby will be at no higher risk of developing diabetes in childhood (Type 1 diabetes) than a baby born to a mother who did not experience gestational diabetes during pregnancy.

In the future, you and your baby, as he or she moves into adulthood may be more likely to develop Type 2 diabetes. Maintaining a healthy weight, eating a well balanced diet and taking regular exercise will help towards keeping diagnosis at bay for as long as possible.

Being diagnosed with gestational diabetes might be a little daunting to begin with but you will receive extra care and support from your specialist healthcare team. Gestational diabetes should not stop you from having a happy, healthy pregnancy.

HCP tick as appropriate for when to test

	Target range mmol/L
☐ Fasting (before eating in the morning)	_____ to _____
☐ Pre–Meal	_____ to _____
☐ 1 Hour Post-Meal	_____ to _____
☐ 2 Hour Post-Meal	_____ to _____
☐ Before Bed	_____ to _____

Notes

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This guide is intended to help you achieve better control of your gestational diabetes. The information in this guide is not intended to replace the advice of your healthcare professional. Always consult with your healthcare professional for further information, recommendations, and treatment decisions.

For other leaflets in this range go to www.agamatrix.co.uk

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† Aston, L. M., Jackson, D., Monsheimer, S., Whybrow, S., Handjieva-Darlenska, T., Kreutzer, M., Kohl, A., Papadaki, A., Martinez, J. A., Kunova, V., Van Baak, M. A., Astrup, A., Saris, W. H. M., Jebb, S. A. and Lindroos, A. K. (2010), *Developing a methodology for assigning glycaemic index values to foods consumed across Europe*. Obesity Reviews, 11: 92–100. doi:10.1111/j.1467-789X.2009.00690.x

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