Diagnosed with a change in the Glucokinase (GCK) gene

NHS
South East
Genomic Medicine Service

You were offered genetic testing to see if your raised blood glucose is caused by a change in the *Glucokinase (GCK)* gene.

Your genetic test has shown that **you <u>do</u>** have a change in the *GCK* gene. This is called glucokinase hyperglycaemia.

Although this causes mildly raised blood glucose levels, this is **not diabetes** and is not known to cause long term health problems. After your pregnancy you will not need further care from a diabetes service. People with a change in the *GCK* gene have the same risk of developing Type 2 diabetes as other members of the general population.

Management during pregnancy

Treatment in pregnancy depends on whether or not your baby has inherited this genetic change.

As you have been identified as having a change in the *GCK* gene, your baby has a 1 in 2 (50%) chance of also having the same gene change. A blood test may be offered during pregnancy to help find out whether your baby has inherited the gene change. This is possible because a small amount of the baby's DNA is present in your bloodstream and can be analysed. To carry out this test, a blood sample from the baby's biological father is also needed.

If your baby has inherited the *GCK* gene change from you, you are **<u>not</u>** at increased risk of having a bigger than average baby. There is no need for diabetes medication and early induction of labour is unlikely to be required.

Monitoring and medication, including insulin injections & early birth, may be considered if:

- Your baby has not inherited the GCK gene change
- Testing is unsuccessful or does not provide a clear result
- Testing is not performed due to circumstances such as the unavailability of a sample from the baby's biological father, or if you are expecting more than one baby (for example, twins), or due to personal choice
- A change in the GCK gene where the meaning of that result is not yet known (called a variant of unknown significance) is found

There is an increased chance of you having a bigger than average baby if they have not inherited the change in the *GCK* gene. You will be offered scans to monitor your baby's growth. Your doctors will consider treatment to assist with your blood glucose control and early birth.

Can my family be tested for the same *GCK* gene change?

We suggest that you may wish to make your biological family members aware that you have this *GCK* gene change, as it is an inherited condition.

If you have any family members who have **already been diagnosed with diabetes**, we will give you information to pass on to your relatives. They can then pass this on to their health care provider (for example their GP, practice nurse and/or diabetes team), explaining the genetic diagnosis in the family. Their health care team may wish to review their existing diabetes diagnosis in relation to this new genetic information and offer them genetic testing.

Other family members who haven't been diagnosed with diabetes **do not** need to have genetic testing. However, they may wish to discuss with their GP if they are planning a pregnancy or are found to have a raised fasting blood glucose on a routine health check.

Further information can be found at:

DiabetesGenes