

The identification and treatment of women with hyperglycaemia in pregnancy: an analysis of individual participant data, systematic reviews, meta-analyses and an economic evaluation

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Plain English summary

Identification and treatment of pregnant women with hyperglycaemia

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Plain English summary

When a woman is pregnant, hormonal changes cause blood glucose (sugar) levels to increase so that her infant can grow and develop. For some women glucose levels become too high; this is called gestational diabetes mellitus (GDM). The babies of these women can grow excessively, be larger and fatter at birth, and therefore have more complications during birth. Doctors, midwives and researchers are worried that babies of these mothers might be fatter and at greater risk of diabetes and heart disease later in life. It is not clear how GDM should be diagnosed or treated to try and prevent these problems. Therefore, we undertook research to find out the best way of diagnosing and treating GDM.

We found that the risk of having a larger baby and having complications around the time of birth increased with each greater level of blood glucose in the mother. We showed that more babies at risk of being too large and having problems at birth would be identified if a lower level of glucose was used to diagnose GDM. This was particularly the case for South Asian women. Once a woman is diagnosed with GDM, changing her diet, and treatment with a tablet called metformin or insulin injections will all reduce the risk of having a large baby and pregnancy complications. However, the identification and treatment of women with GDM using the currently recommended cost-effectiveness threshold is not the best-performing strategy. So far there have not been any large studies that have looked at whether or not GDM really does cause longer-term problems for children, and, if so, whether or not treatments will help reduce these problems. Further research is needed to evaluate the longer-term effects of identifying and treating GDM.

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