

Diabetes linked to higher rate of birth defects

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(Medical Xpress) -- Pregnant women with diabetes are almost four times more likely to have a baby with a birth defect than women without the condition and the likelihood is linked to the mother's glucose level, according to a new study.

The study, led by researchers at Newcastle University and the Regional [Maternity](#) Survey Office, and funded by [Diabetes](#) UK, suggests that as many as one in 13 [deliveries](#) to women with Type 1 or [Type 2 diabetes](#) involves a major [congenital anomaly](#), also known as a [birth defect](#).

But the researchers and Diabetes UK have emphasised that, while concerning, this still means that the vast majority of pregnancies in women with diabetes do not involve a birth defect.

The study also showed that blood [glucose levels](#) around the time of conception was the most important factor predicting risk of congenital

anomaly.

The findings have prompted Diabetes UK to urge women with diabetes who are considering becoming pregnant to make sure they understand the importance of careful planning. It has also called for the NHS to provide better care for women with diabetes who may be planning to have a baby and for women who are thinking of becoming pregnant to attend a pre-conception clinic if one exists in their area or to ask their GP to put them in contact with a diabetes specialist if not.

Dr. Ruth Bell, the study's lead researcher, said: "The good news is that, with expert help before and during [pregnancy](#), most women with diabetes will have a healthy baby. The risk of problems can be reduced by taking extra care to have optimum glucose control before becoming pregnant. Any reduction in high glucose levels is likely to improve the chances of a healthy baby.

"All young women with diabetes need to know about preparing for pregnancy, and should contact their doctor or diabetes team as soon as possible if they are thinking about pregnancy or become pregnant."

Previous research has established that having diabetes increases the chance of birth defects, but this is one of the first studies to quantify the effect of glucose levels on risk. Published in the journal *Diabetologia*, the study involved an investigation of the recorded outcomes of 401,149 pregnancies, including 1,677 pregnancies in women with diabetes, between 1996 and 2008 in the north of England.

The analysis showed that the risk of a birth defect in the pregnancies of women with Type 1 or Type 2 diabetes was seven per cent, compared to an average of around two per cent in pregnancies where the mother did not have diabetes. The chance of a birth defect was reduced significantly in women with diabetes who had blood glucose levels within the

recommended ranges, which according to Diabetes UK has highlighted the importance of healthcare teams encouraging women who are thinking of becoming pregnant to get their blood glucose level as low as is safely possible.

Professor Rudy Bilous, from South Tees NHS Foundation Trust, said "This is one of the largest studies of its type. It was made possible by NHS clinical teams throughout the region working together to collect information about pregnancies in women with diabetes and improve the services provided."

Dr. Iain Frame, Director of Research for Diabetes UK, said: "The real message from this study is that the blood glucose level of the mother is important to the risk.

"This study offers clear evidence that although women with diabetes might still have a higher risk of a birth defect, they can still do something positive to reduce that risk by carefully monitoring their blood glucose level and trying to reduce it if it is high.

"We need to get the message out to women with diabetes that if they are considering becoming pregnant, then they should tell their diabetes healthcare team, who will make sure they are aware of planning and what next steps they should be taking. [Blood glucose](#) control continues to be important throughout pregnancy and should be closely monitored to ensure the best result for the baby and this is why women should be as prepared as possible beforehand.

"It also highlights the importance of using contraception if you are a woman with diabetes who is sexually active but not planning to become pregnant. This is because as well as high [blood glucose levels](#) increasing risk of birth defect, some medications taken by people with Type 2 diabetes can cause problems in the developing foetus and higher doses of

folic acid are needed for women with diabetes to reduce the risk of complications such as spina bifida."

One of Diabetes UK's 15 health essentials is that women should get information and specialist care if they are planning to have a baby because diabetes control has to be a lot tighter and monitored very closely. [Women](#) should expect care and support from specialist healthcare professionals at every stage from preconception to post-natal care.

Birth defects can affect any part of the body, and include congenital heart disease and defects of the nervous system such as spina bifida. Many can be treated but some result in stillbirth or pregnancy loss or ongoing health problems.

More information: Diabetes UK has an [online video](#) about pre-conception care and diabetes.

Provided by Newcastle University

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