

# Study finds up to half of gestational diabetes patients will develop type 2 diabetes

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Women who were diagnosed with gestational diabetes during pregnancy face a significantly higher risk of developing Type 2 diabetes in the future, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)*.

The prospective cohort study tracked 843 women who were diagnosed with [gestational diabetes](#) between 1996 and 2003 at Cheil General Hospital in Seoul, South Korea. About 12.5 percent of the women developed Type 2 diabetes within two months of delivering their babies. During the next decade, the number of women diagnosed with Type 2 diabetes continued to grow at a rate of 6.8 percent a year.

"The findings indicate as many as half of Asian women who had gestational diabetes will develop Type 2 diabetes within eight years of giving birth," said the study's lead author, Soo Heon Kwak, MD, of Seoul National University Hospital.

The study is among the largest of its kind to study Asian women who had gestational diabetes. Researchers followed 370 participants for more than a year after the birth of their children. Of the remaining women studied, 105 were diagnosed with type 2 diabetes within two months of giving birth and the remainder did not participate in long-term follow-up visits.

Researchers identified two distinct groups of women who were at risk –

those who developed Type 2 diabetes within two months of giving birth and those who took a year or more to progress to a Type 2 diabetes diagnosis. Although obesity was a major risk factor for both groups, researchers found genetic variations that could explain the timing of the disease's onset.

Women who rapidly developed Type 2 diabetes had a significant defect in insulin secretion. Among this population, researchers found a variation in the HHEX (hematopoietically expressed homeobox) gene that is associated with Type 2 diabetes.

Women who were slower to develop Type 2 diabetes were more likely to have a variation in the CDKAL1 gene, which also has been linked to Type 2 diabetes.

More research into genetic and environmental risk factors is needed to develop models that can better predict who will develop Type 2 diabetes, Kwak said. In the meantime, women who had gestational diabetes should undergo regular blood sugar testing.

"It is crucial for [women](#) who had gestational [diabetes](#) to have their blood sugar levels checked two months after [giving birth](#) and annually thereafter," Kwak said. "In addition to the problems undiagnosed [Type 2 diabetes](#) poses to the mother, leaving the disease untreated increases the risk of any future children developing congenital disorders."

**More information:** The article, "Clinical and Genetic Risk Factors for Type 2 Diabetes at Early or Late Post-partum after Gestational Diabetes Mellitus," appears in the April 2013 issue of JCEM.

Provided by The Endocrine Society

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