

# Increased first-trimester HbA1c predicts gestational diabetes

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(HealthDay)—First-trimester glycated hemoglobin (HbA1c) may aid in

early identification of women at risk for gestational diabetes mellitus (GDM), according to a study published online Aug. 16 in *Scientific Reports*.

Stefanie N. Hinkle, Ph.D., from the National Institutes of Health in Bethesda, Md., and colleagues assessed the prospective association between first-trimester HbA1c and GDM as well as the utility of HbA1c for prediction of GDM. Women participating in the Fetal Growth Studies-Singleton Cohort (2009 to 2013) were included. In 107 GDM cases and 214 matched controls, HbA1c was measured at 8 to 13, 16 to 22, 24 to 29, and 34 to 37 gestational weeks. Women with HbA1c  $\geq 6.5$  percent at enrollment (three women) or who had a hemoglobin variant (six women) were excluded.

The researchers found that women who later developed GDM had significantly higher HbA1c at 8 to 13 gestational weeks than women without GDM (5.3 versus 5.1 percent). This difference in HbA1c remained significant throughout pregnancy. At 8 to 13 weeks, each 0.1 percent increase in HbA1c was associated with an adjusted 22 percent increased GDM risk. Compared to conventional risk factors, first-trimester HbA1c significantly improved GDM prediction (area under the curve, 0.59 versus 0.65).

"Women who develop GDM may have impaired glucose homeostasis early in or prior to pregnancy, as indicated by their elevated first-trimester HbA1c," the authors write.

**More information:** [Abstract/Full Text](#)

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