

Joslin researchers report excessive fetal growth despite well-controlled type 1 diabetes

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Diabetes Technology & Therapeutics (DTT) is a monthly peer-reviewed journal that covers new technology and new products for the treatment, monitoring, diagnosis, and prevention of diabetes and its complications. Credit: Mary Ann Liebert, Inc., publishers

A new study has shown that despite excellent glycemic control and low glycemic variability throughout their pregnancies, women with type 1 diabetes tended to give birth to infants who were large for gestational age. Researchers documented elevated fetal weight and abdominal circumference percentages throughout the pregnancies that were consistent with accelerated

prenatal growth, as documented in *Diabetes Technology & Therapeutics* (DTT).

Florence Brown, MD, Harvard T.H. Chan School of Public Health, Joslin Diabetes Center, and Harvard Medical School, and coauthors from these institutions and Beth Israel Deaconess Medical Center, Boston, MA, used continuous glucose monitoring (CGM) to determine glycemic variability over a 7-day period in each trimester of the women's pregnancies. In the article entitled "Continuous Glucose Monitoring, Glycemic Variability, and Excessive Fetal Growth in Pregnancies Complicated by Type 1 Diabetes" the researchers reported mean HbA1c of 6.5%, 6.1%, and 6.4% during the first, second, and third trimester, respectively.

"Fetal macrosomia continues to be a problem in patients with type 1 [diabetes](#) associated with [pregnancy](#) despite improvements in overall glucose control. With the availability of a hybrid-closed loop system, it will be important to see if fetal overweight can be reduced with automatic delivery of insulin based on sensor [glucose](#) values," says DTT Editor-in-Chief Satish Garg, MD, Professor of Medicine and Pediatrics at the University of Colorado Denver (Aurora).

More information: Bethany M. Mulla et al, Continuous Glucose Monitoring, Glycemic Variability, and Excessive Fetal Growth in Pregnancies Complicated by Type 1 Diabetes, *Diabetes Technology & Therapeutics* (2018). [DOI: 10.1089/dia.2017.0443](#)

Provided by Mary Ann Liebert, Inc

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