

Metformin added to insulin not beneficial for T2D in pregnancy

December 12 2023, by Elana Gotkine



For pregnant women with type 2 diabetes, the addition of metformin to insulin does not affect composite adverse neonatal outcomes, according to a study published in the Dec. 12 issue of the *Journal of the American Medical Association*.

Kim A. Boggess, M.D., from the University of North Carolina at Chapel

Hill School of Medicine, and colleagues estimated the effect of metformin added to [insulin](#) in a [randomized clinical trial](#) involving pregnant adults aged 18 to 45 years with preexisting type 2 diabetes or diabetes diagnosed prior to 23 weeks of gestation. Participants were treated with insulin and assigned to receive metformin 1,000 mg or placebo from enrollment through delivery (397 in each group).

The researchers found that the composite adverse neonatal outcome occurred in 71 and 74 percent of participants in the metformin and placebo groups, respectively (adjusted odds ratio, 0.86; 95 percent confidence interval, 0.63 to 1.19). In both groups, the most commonly occurring events in the primary outcome were [preterm birth](#), neonatal hypoglycemia, and delivery of a large-for-gestational-age infant.

Due to the futility of detecting a significant difference in primary outcome, the study was halted at 75 percent accrual. The odds of being large for gestational age were lower for metformin-exposed neonates compared with the [placebo group](#) in an analysis of the individual components of the composite adverse neonatal outcome (adjusted odds ratio, 0.63; 95 percent confidence interval, 0.46 to 0.86).

"The effect of reduction in odds of a large for gestational age infant observed after adding metformin to insulin warrants further investigation," the authors write.

One author disclosed ties to the pharmaceutical industry.

More information: Kim A. Boggess et al, Metformin Plus Insulin for Preexisting Diabetes or Gestational Diabetes in Early Pregnancy, *JAMA* (2023). [DOI: 10.1001/jama.2023.22949](https://doi.org/10.1001/jama.2023.22949)

Denice S. Feig, Metformin for Diabetes in Pregnancy, *JAMA* (2023). [DOI: 10.1001/jama.2023.18589](https://doi.org/10.1001/jama.2023.18589)

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