

Breastfeeding lowers risk of type 2 diabetes following gestational diabetes

November 23 2015

Women with gestational diabetes who consistently and continuously breastfeed from the time of giving birth are half as likely to develop type 2 diabetes within two years after delivery, according to a study from Kaiser Permanente published today in *Annals of Internal Medicine*.

Gestational diabetes mellitus, or [high blood glucose](#) during pregnancy, is diagnosed in 5 percent to 9 percent of all pregnancies in the United States—approximately 250,000 women annually. Women with [gestational diabetes](#) are up to seven times more likely to develop type 2 diabetes within several years after pregnancy. Breastfeeding is recommended for women with GDM, but previous studies exploring the impact of breastfeeding on subsequent development of diabetes have had inconsistent findings.

In this study, women who exclusively or mostly breastfed for at least two months after giving birth, and those who continued to breastfeed for several months, were able to cut their risk for type 2 diabetes by half.

"Both the level and duration of breastfeeding may offer unique benefits to women during the post-delivery period for protection against development of type 2 diabetes after gestational diabetes pregnancy," said lead author Erica P. Gunderson, PhD, MPH, MS, epidemiologist and senior research scientist at the Kaiser Permanente Division of Research.

The "Study of Women, Infant Feeding and Type 2 Diabetes after GDM

Pregnancy," also known as the SWIFT Study, is the first to measure breastfeeding on a monthly basis during the first year after delivery and to enroll a statistically significant number of women with gestational diabetes. It is also the first to evaluate social, behavioral and prenatal risk factors that influence development of type 2 diabetes, as well as breastfeeding initiation and success.

The study enrolled more than 1,000 Kaiser Permanente members in Northern California who were diagnosed with gestational diabetes during pregnancy between 2008 and 2011. The SWIFT cohort was racially and ethnically diverse, with 75 percent of the women reporting Hispanic, Asian or African-American heritage. In-person exams, which included oral glucose tolerance tests, were conducted at six to nine weeks after delivery as women enrolled in the study, and again at one year and two years post-delivery in those who did not have diabetes at baseline.

Almost 12 percent of women in the study developed type 2 diabetes within two years after delivery. Those who exclusively formula-fed their babies at six to nine weeks of age were more than twice as likely to develop diabetes as women who exclusively breastfed their infants. There was a graded 35 percent to 57 percent reduction in the two-year diabetes incidence associated with greater lactation intensity—from exclusively formula-feeding to exclusively breastfeeding, and with increasing lactation duration—from less than two months to more than 10 months of breastfeeding.

A major strength of the study was the ability to control for numerous influences on breastfeeding and other diabetes risk factors, including maternal obesity before pregnancy, gestational weight gain, prenatal metabolism, treatment for gestational diabetes, C-section delivery, infant size and birth outcomes, race/ethnicity, and lifestyle behaviors such as diet, physical activity and weight change. The association between breastfeeding intensity and duration with lower risk of developing type 2

diabetes remained after accounting for these variables.

"These findings highlight the importance of prioritizing [breastfeeding](#) education and support for [women](#) with gestational diabetes as part of early diabetes prevention efforts by health care systems," Dr. Gunderson concluded.

More information: *Annals of Internal Medicine*,
[dx.doi.org/10.7326/M15-0807](https://doi.org/10.7326/M15-0807)

Provided by Kaiser Permanente

Citation: Breastfeeding lowers risk of type 2 diabetes following gestational diabetes (2015, November 23) retrieved 19 April 2024 from
<https://medicalxpress.com/news/2015-11-breastfeeding-lowers-diabetes-gestational.html>

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