

# Thirty-year study shows women who breastfeed for six months or more reduce their diabetes risk

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In a long-term national study, breastfeeding for six months or longer cuts the risk of developing type 2 diabetes nearly in half for women throughout their childbearing years, according to new Kaiser Permanente research published Jan. 16 in *JAMA Internal Medicine*.

"We found a very strong association between breastfeeding duration and lower risk of developing [diabetes](#), even after accounting for all possible confounding [risk factors](#)," said lead author Erica P. Gunderson, PhD, MS, MPH, senior research scientist with the Kaiser Permanente Division of Research.

Women who breastfed for six months or more across all births had a 47 percent reduction in their risk of developing type 2 diabetes compared to those who did not breastfeed at all. Women who breastfed for six months or less had a 25 percent reduction in diabetes risk.

Dr. Gunderson and colleagues analyzed data during the 30 years of follow up from the Coronary Artery Risk Development in Young Adults (CARDIA) study, a national, multi-center investigation of cardiovascular disease risk factors that originally enrolled about 5,000 adults aged 18 to 30 in 1985 to 1986, including more than 1,000 members of Kaiser Permanente Northern California.

The new findings add to a growing body of evidence that breastfeeding [[hyperlinked to above](#)] has protective effects for both mothers and their offspring, including lowering a mother's risk of breast and ovarian cancer. The CARDIA findings are also consistent with those of the NIH-funded Study of Women, Infant Feeding and Type 2 Diabetes after GDM Pregnancy (SWIFT), also led by Gunderson, which includes routine biochemical screening for diabetes in women after [gestational diabetes](#) from the early postpartum period and years later.

The long-term benefits of breastfeeding on lower diabetes risk were

similar for [black women](#) and [white women](#), and women with and without gestational diabetes. Black women were three times as likely as white women to develop diabetes within the 30-year study, which is consistent with higher risk found by others. Black women enrolled in CARDIA were also less likely to breastfeed than white women.

"The incidence of diabetes decreased in a graded manner as breastfeeding duration increased, regardless of race, gestational diabetes, lifestyle behaviors, body size, and other metabolic risk factors measured before pregnancy, implying the possibility that the underlying mechanism may be biological," Gunderson said. Several plausible biological mechanisms are possible for the protective effects of breastfeeding, including the influence of lactation-associated hormones on the pancreatic cells that control blood insulin levels and thereby impact blood sugar.

Based on the strong evidence for the numerous health benefits of breastfeeding for mothers and babies, Kaiser Permanente provides strong support for all mothers who choose to breastfeed.

"We have known for a long time that breastfeeding has many benefits both for mothers and babies, however, previous evidence showed only weak effects on chronic disease in women," said Tracy Flanagan, MD, director of women's health for Kaiser Permanente Northern California. "Now we see much stronger protection from this new study showing that mothers who breastfeed for months after their delivery, may be reducing their risk of developing type 2 diabetes by up to one half as they get older. This is yet another reason that doctors, nurses, and hospitals as well as policymakers should support women and their families to breastfeed as long as possible."

This study included 1,238 black and white women who did not have diabetes when they enrolled in CARDIA, or prior to their subsequent

pregnancies. Over the next 30 years, each woman had at least one live birth and was routinely screened for diabetes under the CARDIA protocol, which included diagnostic screening criteria for diabetes. Participants also reported lifestyle behaviors (such as diet and physical activity) and the total amount of time they breastfed their children.

"Unlike previous studies of [breastfeeding](#), which relied on self-reporting of diabetes onset and began to follow older women later in life, we were able to follow [women](#) specifically during the childbearing period and screen them regularly for diabetes before and after pregnancies, Gunderson said. She and her colleagues were also able to account for pre-pregnancy metabolic risk, including obesity and fasting glucose and insulin, [lifestyle behaviors](#), family history of diabetes, and perinatal outcomes.

**More information:** *JAMA Internal Medicine* (2018).  
[jamanetwork.com/journals/jamai ... ainternmed.2017.7978](https://jamanetwork.com/journals/jamai...ainternmed.2017.7978)

Provided by Kaiser Permanente

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