

Does having a child with low birth weight increase a person's risk of dementia?

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People who give birth to infants less than 5.5 pounds may be more likely to have memory and thinking problems later in life than people who give birth to infants who do not have a low birth weight, according to a study

published in the June 12, 2024, online issue of *Neurology*. The effect on memory and thinking skills was equivalent to one to two years of aging for those with low-birth-weight deliveries.

The study does not prove that [delivery](#) of a [low-birth-weight](#) infant causes [memory](#) and thinking problems. It only shows an association.

"Previous research has shown that people who have had a low-birth-weight delivery have a higher risk of cardiovascular disease and high blood pressure," said study author Diana C. Soria-Contreras, Ph.D., of the Harvard T.H. Chan School of Public Health in Boston, Massachusetts. "Our study found that a history of having a child with a low birth weight may also be a marker of poorer cognition later in life."

The study involved 15,323 [female participants](#) with an average age of 62 at completion of thinking and memory tests. All the participants had at least one birth. Of the total participants, 1,224 people, or 8%, had a history of low-birth-weight delivery. Low birth weight was defined as less than 5.5 pounds for pregnancies lasting more than 20 weeks.

Participants completed a questionnaire about their pregnancy complications, birth outcomes, birth weight and other information.

They also completed a series of thinking and memory tests.

Researchers then combined average scores of the two tests of participants' memory and ability to quickly and accurately respond to a situation as well as the two tests of learning and working memory. Higher scores indicated better memory and thinking. On average, the difference in scores between those with and without a low-birth-weight delivery was -0.06 for speed and attention tests and -0.05 for learning and working memory. This is comparable to the difference associated with one to two additional years of age in this population.

The results were similar after researchers adjusted for factors that could affect both birth weight and cognitive function, such as age, smoking status and high blood pressure. The results were also similar when researchers did not include people with premature deliveries, pregnancies with twins or other multiples or those affected by pregnancy-related [high blood pressure](#) disorders.

In addition, they found that the more low-birth-weight deliveries people had, the lower their scores were.

"Future research is needed to confirm our findings and to look at whether screening women with a history of low-birth-weight deliveries for cognitive issues and taking steps to promote their brain health could help prevent or delay [cognitive impairment](#) and dementia later on," Soria-Contreras said.

A limitation of the study is that most of the participants were non-Hispanic white people, so results may not be generalizable to other populations.

More information: Diana C. Soria-Contreras et al, Lifetime History of Low Birth Weight Delivery and Cognitive Function in Middle-Aged Parous Women, *Neurology* (2024). DOI: 10.1212/WNL.0000000000209504 , [dx.doi.org/10.1212/WNL.0000000000209504](https://doi.org/10.1212/WNL.0000000000209504)

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