

Taking folic acid supplements for pregnancy linked to child's speech development

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The benefits of taking folic acid supplements before and during pregnancy may extend beyond birth defects and influence child language development, suggests a study of a Norwegian cohort, published by a team of European and North American researchers.

Women of childbearing age are advised to take folic acid supplements (400 micrograms per day) continued to the 12th week of pregnancy, to reduce the risk of the baby being born with a neural tube defect (such as spina bifida). Further effects of folic acid on neurodevelopment after birth had not yet been investigated. This study looked at severe language delay at 3 years of age, using the Norwegian Mother and Child Cohort Study.

Mothers completed questionnaires, ranking their child's level of language development on a 6 category scale (ranging from no word production to full sentences with complete grammatical markings). Children of three years, not able to speak more than 1 word or unintelligible utterances, were defined as having severe language delay. The study excluded children with no word production. The analysis involved 38,954 children, of which 204 (0.5%) had severe language delay.

Women were asked about their supplement use between 4 weeks before conception to 8 weeks after conception, and categorised as using folic acid only, folic acid in combination with other supplements, or supplements not containing folic acid, or none at all.

Compared to women who did not take any supplements, taking folic acid on its own, or with other supplements was associated with a 45% reduced risk (odds ratio 0.55) of the child having severe language delay at 3 years of age.

This was after adjustment to account for (confounding) factors which could be responsible: the mother's education and weight (given as Body Mass Index, i.e. body weight in kg divided by height in metres squared), parity and whether or not they were married. Furthermore the associations remained after adjustment for other potential confounders (father's education, age of parents, whether the pregnancy was planned, if the mother smoked during pregnancy, or used alcohol in the first trimester, mother's height in meters, breastfeeding at 6 months), missing data, children born before gestational week 32, <2.5kg or with hearing problems, or with no word production at age 3 years.

The risks appeared reduced for women who initiated supplement use before week 8, but this conclusion is impeded by the small number of women who started taking supplements after this time (12.5% of children).

The attainment of gross motor skills was also assessed, by for example asking mothers whether their child

could hold a large ball with both hands. Delay in gross motor skills was found in 2.5% of children, however, no association with folic acid intake was found.

Severe language delay is a rare condition, but has profound social and clinical implications. This study is not proof that folic acid prevents language delay but does bring new thoughts to research aiming to understand the role of nutrients in neurodevelopment.

For more information, see

[Roth C et al. \(2011\). Folic Acid Supplements in Pregnancy and Severe Language Delay in Children. JAMA 306\(14\):1566-1573.](#)

At: <https://www.eufic.org/en/healthy-living/article/a-healthy-way-through-pregnancy>