

New study examines the effect of timing of folic acid supplementation during pregnancy

November 25 2014

Taking folic acid before conception significantly reduces the risk of small for gestational age (SGA) at birth, suggests a new study published today (26 November) in *BJOG: An International Journal of Obstetrics and Gynaecology (BJOG)*.

This UK population-based study and [systematic review](#) assessed the effect of [timing](#) of folic acid supplementation during pregnancy on the risk of the baby being SGA at birth, defined as [birth weight](#) less than the 10th centile or in the lowest 10% of babies born.

Being small for [gestational age](#) is associated with increased neonatal morbidity and mortality and an increased risk of chronic diseases in later life such as diabetes, hypertension, obesity, cardiovascular disease and mental health problems, states the study.

Folic acid supplementation has already been shown to reduce the risk of neural tube defects, such as spina bifida, and it is recommended in the UK for women to start folic acid supplementation pre-conceptually. However, uptake is low, state the authors, and previous studies have suggested rates of pre-conceptual uptake to be between 14.8% and 31%, with lower uptake in younger age groups and ethnic minorities.

The total study population represents a diverse group, with a mean maternal age of 28.7 years, a median BMI of 24.7 and 42% were first time mothers. Additionally, the majority were non-smokers (81.7%).

Of 108,525 pregnancies with information about folic acid supplementation, 84.9% had taken folic acid during pregnancy. Time of commencement of supplementation was recorded in 39,416 pregnancies, of which folic acid was commenced before conception in 25.5% of cases.

Results show that the overall proportion of babies with a birth weight under the 10th and 5th centile was 13.4% and 7% respectively. The highest rate of SGA occurred in pregnancies where no folate had been taken, with 16.3% under the 10th centile and 8.9% under the 5th centile.

When comparing pre- and post-conceptual folic acid supplementation, the prevalence of birth weight lower than the 10th centile was 9.9% and 13.8% respectively, while that of birth weight under the 5th centile was 4.8% and 7.1% respectively.

The authors conclude that although folic acid supplementation is a standard recommendation in the UK, it is a policy that is poorly followed and strategies to increase uptake must be evaluated.

Additionally, further research is needed to focus on how folic acid supplementation produces its effect on birth weight and how the dose of supplementation can be optimised in women considered to be at higher risk of SGA, state the authors.

Khaled Ismail, Professor of Obstetrics and Gynaecology at the University of Birmingham and co-author of the study said:

"Increased uptake of [folic acid](#) prior to pregnancy and throughout the first trimester could have significant public health benefits given the poor outcomes associated with SGA babies. New strategies are therefore vital to improve the lives of both mothers and babies."

John Thorp, *BJOG* Deputy Editor-in-chief, added:

"The population study is the largest database to look at the timing of folate intake and the risk of a baby being SGA.

"The findings of this study are of particular importance because growth restriction is known to be associated with poor short and long term outcomes and currently there are no established preventative treatment options for SGA."

More information: Hodgetts VA, Morris RK, Francis A, Gardosi J, Ismail KM. Effectiveness of folic acid supplementation in pregnancy on reducing the risk of small for gestational age neonates: A population study, systematic review and meta-analysis. *BJOG* 2014; [dx.doi.org/10.1111/1471-0528.13202](https://doi.org/10.1111/1471-0528.13202)

Provided by Wiley

Citation: New study examines the effect of timing of folic acid supplementation during pregnancy (2014, November 25) retrieved 20 April 2024 from <https://medicalxpress.com/news/2014-11-effect-folic-acid-supplementation-pregnancy.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.