

Mortality rates reduced among children whose mothers received iron-folic acid supplements

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Offspring whose mothers had been supplemented with iron-folic acid during pregnancy had dramatically reduced mortality through age 7, according to researchers at the Johns Hopkins Bloomberg School of Public Health. Researchers found that other supplement combinations, including the multiple micronutrient supplement, did not confer the same benefit. Nearly 40 percent of pregnant women worldwide are estimated to be anemic. Although there is an international policy for antenatal iron-folic acid supplementation, coverage and use of this antenatal intervention is low in many developing countries. The results are featured in the September 24 issue of the *American Journal of Epidemiology*.

"In a setting where maternal iron deficiency and anemia are common, we found a 31 percent reduction in childhood mortality due to maternal antenatal and postnatal supplementation with iron-folic acid compared to a control," said Parul Christian, DrPH, MSc, lead author of the study and an associate professor in the Bloomberg School's Department of International Health. "A reduction in mortality resulting from an intervention, such as iron-folic acid supplementation during pregnancy, provides a new and previously unreported evidence of benefit to offspring during childhood. To our knowledge this is the first time the long-term effects of maternal iron-folic acid supplementation on childhood survival have been examined."

Christian and colleagues examined the long-term impact of micronutrient supplementation on childhood survival, growth, and early markers of chronic disease among the offspring of women who received micronutrient supplementation. The study is a follow-up to a 1999 to 2001 randomized, double-masked trial of the administration of micronutrients during pregnancy to women in the rural southern plains district of Sarlahi, Nepal. At the time the team examined [folic acid](#); folic acid-iron; folic acid-iron-zinc, as well as a multiple micronutrients that contained the foregoing plus 11 other micronutrients. Vitamin A alone was provided in the control group and each of the four supplement groups also contained vitamin A. They found that iron-folic acid supplementation relative to the control significantly reduced the prevalence of low birth weight by 16 percent and the prevalence of maternal anemia during pregnancy and the postpartum period by 50 percent.

"Supplementation with iron and folic acid during pregnancy is a common policy in many low- and middle-income countries, although implementation is typically not very good," said James Tielsch, PhD, professor and associate chair for academic programs at the Bloomberg School of Public Health. "This policy has been motivated primarily by the beneficial effects of supplementation on [anemia](#) in pregnancy and maternal iron stores. Following their previous demonstration that iron-folic acid supplementation during [pregnancy](#) increased birth weight, Christian, et al., have now provided unique data on the critical importance of this intervention for improving child survival. This strong evidence should reenergize programs for the delivery of this critical intervention for maternal and child health."

More information: "Antenatal and Postnatal Iron Supplementation and Childhood Mortality in Rural Nepal: A Prospective Follow-up in a Randomized, controlled Community Trial" was written by Parul Christian, Christine P. Stewart, Steven C. LeClerq, Lee Wu, Joanne

Katz, Keith P. West Jr., and Subarna K Khattry. [American Journal of Epidemiology](#)

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