

Zinc during pregnancy does not influence child development

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NEW YORK (Reuters Health) - Although zinc is critical for central nervous system development, consumption of zinc supplements by pregnant women did not influence developmental outcomes in their children, according to a study in Peru.

Earlier studies have presented inconsistent data on the importance of maternal zinc supplementation for cognitive and behavioral development of infants in resource-poor areas.

In a previous randomized trial, lead investigator Dr. Laura Caulfield and her colleagues established that fetuses showed improved neurobehavioral development when Peruvian mothers received regular 25 mg zinc supplements (in addition to iron and folic acid). The team had followed 195 fetuses from 20 to 38 weeks gestation.

In this follow-up study, published online May 19th in the American Journal of Clinical Nutrition, Dr. Caulfield from The Johns Hopkins Bloomberg School of Public Health in Baltimore and colleagues evaluated whether maternal zinc supplementation continued to influence cognitive, social, and behavioral development in these children at 2 to 4.5 years of age.

"The results here indicate that the addition of zinc to the regular iron and folic acid prenatal supplements consumed by Peruvian women did not influence any developmental outcomes in their children when assessed at 54 months of age," the researchers write.

Of the 184 children in the study, 86 of the mothers had received 25 mg zinc/day (plus to 60 mg iron and 250 mcg folic acid) during pregnancy and 98 mothers had taken only iron and folic acid.

At the later follow-up, the team observed no significant differences between the two groups on any of the tests evaluating intelligence, language and number skills, representational ability, interpersonal understanding, as well as adaptive behavior and behavioral adjustment.

Gender and treatment compliance did not modify the effects of supplementation on any outcomes.

These findings are consistent with the only other similar study. That trial had evaluated 5-year-old low-income children in the United States whose mothers received 25 mg zinc/day or placebo during the latter half of pregnancy.

"Although the studies are quite different in terms of population and methods for assessing child development, together the findings suggest that maternal zinc supplementation during pregnancy does not appear to have lasting effects on child cognitive, social, or behavioral development," the researchers say.

<http://www.ajcn.org/cgi/content/abstract/ajcn.2010.29407v1>

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