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In addition to helping prevent neural tube defects, folic acid status during pregnancy may also play a role in emotional problems in children years after they are born.

FOLIC ACID DURING PREGNANCY

Folate is a water soluble B vitamin that plays a number of important roles in the body. Most notably, it is necessary in the formation of DNA and RNA. It is well known that folic acid plays a critical role in neurodevelopment of the fetus, and as such the folic acid recommendation for pregnant women is 600µg per day.

A group of researchers was also curious about what association may exist between maternal folate status and emotional and behavioral problems as well. The researchers recorded plasma folate concentrations and folic acid supplement in 4900 mothers, during the early stages of pregnancy. At three years of age they were able to follow up with 3209 of the children and include their data for analysis. The mothers of each of these children were asked to fill out a child behavior checklist (CBCL). A CBCL is a parent-reported questionnaire used to measure emotional and behavioral problems.

Analysis of the CBCLs showed that children whose mothers had a folate deficiency during their pregnancy were at a higher risk for emotional problems, the same results were seen for folic acid supplementation as well. The CBCL also tested for behavioral problems; however no correlation was seen between folate status and behavioral problems.

This research gives another reason for mothers-to-be to begin folic acid supplementation as early as possible before and then during pregnancy. In addition to helping prevent neural tube defects, this research shows that folic acid supplementation may reduce the risk of emotional problems in children after birth.

Steenweg-de Graaff J, Roza SJ, Steegers EA, et al. Maternal folate status in early pregnancy and child emotional and behavioral problems: the Generation R Study. The American Journal of Clinical Nutrition. 2012;95(6):1413-21.