



November 12, 2011 – Grand Rapids, MI

## Delayed Speech and Folic Acid

The past month has been filled with one study after another that questioned the use of dietary supplements. What got hidden in all the headlines was a study about the use of folic acid before and during pregnancy and its effects on development of the nervous system. I thought you should know about it, especially if you're considering having children.

### The Folic Acid Study

Researchers from Norway wanted to examine the effects of folic acid use during early pregnancy. We know that folic acid prevents neural-tube defects such as spina bifida. The scientists reasoned that folic acid taken early in pregnancy may have a positive effect on other components of the nervous system as well.

They recruited over 100,000 pregnant women during their regular week-17 ultrasound appointment over a 10-year period of time. Over 38,000 women were included in this study. The women answered questionnaires about a variety of topics including supplementation during pregnancy. Later the children were examined regularly to determine physical and cognitive development. Specifically, the researchers wanted to see if there was a relationship between folic acid supplementation during weeks four to eight of pregnancy and speech development at age three; severe speech delay typically occurs in about 1% of all children.

### The Results

Subjects were divided into four groups for analysis: no supplementation of any type, supplementation without folic acid, folic acid alone, and folic acid plus additional supplements. The researchers used standardized tests of motor and speech learning to assess the speech development of the children. Of those mothers who didn't use any supplements or used supplements without folic acid, 0.9% of their children had severe speech delay. In both groups that included folic acid supplementation, 0.4% of their children had severe speech delay or less than half the no-folic-acid groups.

The researchers examined the timing of the folic acid supplementation and found that folic acid before the eighth week of pregnancy significantly reduced the risk of speech delay. Supplementation after 17 weeks showed no difference from the no-folic-acid groups.

### A Closer Look

This study was done as well as if not better than the other studies that were reported in the past month. I'll never be a fan of questionnaires that were taken weeks after the fact but in this case, they had the women fill in the brand and amounts of nutrients in the supplements and the amounts weren't above normal, and that's an important detail if they're going to draw conclusions about effectiveness for people in the real world. Also, speech development is dependent on factors with the mom and in the home such as alcohol intake and education of the parents. They accounted for those factors. This was a positive study that demonstrated a benefit from folic acid supplementation early in pregnancy.

## The Bottom Line

Folic acid supplementation is critical for the development of a baby's nervous system, and based on this study, it's beneficial for more than just reducing neural-tube defects. The effect of supplementation seems to last much longer. The critical factor is the timing of that supplementation: before eight weeks. It would be prudent for women who are considering having children to take a supplement with folic acid even before conception; certainly start taking it as soon as you have a bit of a suspicion you might be pregnant. While the risks are low for defects or speech delays to occur, it can provide low-cost insurance for healthier babies with benefits that last well beyond the womb with virtually no downside for the mother-to-be or mother—because you know you'll be eager to hear those first words as soon as possible.

What are you prepared to do today?

***Dr. Chet***

**Reference:** JAMA. 2011; 306(14):1566-1573.

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