Could something as simple as adding adequate folic acid to her mother's diet reduce the risk of autism in her children? According to a recent study (Surenet al., JAMA, 309: 570-577, 2013), the answer may be yes.

The data for this study were derived from the Norwegian Mother and Child Cohort study. It followed 85,176 children born between 2002 and 2008 for a period of 3 to 10 years after birth. The mothers were divided into two groups - those who used folic acid supplements for a period of at least four weeks prior to conception to at least eight weeks after the start of pregnancy and those who took no folic acid supplements during this period.

The time period for folic acid supplementation was based on previous studies which had shown that this is the most important time period for preventing neural tube defects in the newborn and delayed acquisition of language skills at around year three. The study did not actually record the amount of folic acid the supplement takers were getting, but it was estimated at 200 to 400 µg per day based on customary usage of folic acid supplements in Norway.

The results were quite clear cut. The children of the women taking folic acid supplements were 39% less likely to develop autism than the children of the women not taking folic acid supplements.

So if you are thinking of having children, what does this study mean to you?

- 1) This is a very robust study with a large number of participants, so the results are highly significant. It is not a randomized, placebo controlled study that kind of study would be unethical when you're talking about a health outcome such as autism. However, it is the first study to evaluate the effect of folic acid intake on autism, so further studies will be required to validate this conclusion.
- 2) The good news is that we already know that  $400~\mu g$  of folic acid prior to and during pregnancy significantly reduces the risk of neural tube defects, so  $400~\mu g$  of folic acid is already recommended for any woman who is thinking of becoming pregnant. Since most countries also fortify their foods with folic acid, the amount of folic acid in a simple multivitamin is usually sufficient. The possible effect of folic acid on reducing the risk of autism is just one more reason why you should be sure to get at least  $400~\mu g$  of folic acid every day if you're thinking of giving birth.
- Perhaps the most important thing to keep in mind is that this is a perfect example of the famous Ben Franklin quote: "an ounce of prevention is worth a pound of cure. That's because the latest science tells us that there are literally hundreds of gene defects that can predispose a child to autism. So a drug or nutritional approach that may work well for one child with autism may be of absolutely no benefit to most other autistic children.

The bottom line is that there is no simple nutritional approach that will reliably help a child who was already developed autism, but this study suggests that there may be a very simple nutritional approach that can significantly decrease the likelihood of them developing autism in the first place.

To Your Health!
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