

Folic acid lowers risk of autism, study finds

March 11 2013, by Elin Fugelsnes & Thomas Keilman



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Women who take a vitamin B9 supplement (folic acid) during the beginning weeks of their pregnancy can cut the risk of having a child with autism in half. But the supplement has no effect if it is started more than 8 weeks into the pregnancy.

These findings are the result of a new study carried out at the Norwegian Institute of Public Health. In the study, women who took folic acid

supplements from four weeks before conception to eight weeks into pregnancy had a 40 per cent lower risk of [giving birth](#) to children with childhood [autism](#) (classic autism).

"It appears that the crucial [time interval](#) is from four weeks before conception to eight weeks into pregnancy," states Pål Surén, MD and doctoral fellow at the Norwegian Institute of Public Health.

The study is based on the Norwegian Mother and Child Cohort Study (MoBa) and the Norway Autism Birth Cohort Study (ABC). It covered a total of 85 176 children born in the period 2002–2008.

Inexpensive, simple prevention

Folic acid is a [B vitamin](#) that is essential for the construction and repair of [DNA molecules](#), which control all body cells. Folate is the naturally occurring form of folic acid found in food and in the body.

Most [pregnant women](#) need folic acid supplements to reach the daily recommended levels. The Norwegian Directorate of Health recommends that women who are planning to become pregnant start to take folic acid supplements one month before conception and during the first three months of pregnancy.

The results of the study of the correlation between intake of folic acid supplements and childhood autism indicate that the lower risk is only associated with this specific supplement and not with the consumption of food or other supplements.

"Thus, the findings show that a measure already used here in Norway, one which is simple, inexpensive and without any known side effects among pregnant women, can prevent autism. Previous studies we have carried out have shown that folic acid may have a similar effect on other

developmental disorders as well," Dr Surén says.

Important in other areas as well

The Directorate of Health's recommendations regarding pre-natal folic acid supplements are based on research that shows that the vitamin protects the foetus against spina bifida and other neural tube defects.

The researchers have also found a correlation between [folic acid supplements](#) and the reduced risk of severe language delay by the age of three. Such language problems are common in connection with autism but may also occur with many other conditions.

"It will be a tremendous breakthrough if it turns out that folic acid also prevents other developmental disorders," Dr Surén believes.

Some more vulnerable than others?

Dr Surén and his colleagues will conduct new analyses when the children involved in the study are older, among other things to examine whether there is any correlation between folic acid and a reduced risk of other developmental disorders such as ADHD and cerebral palsy. They will also carry out genetics studies.

"We know that there is a genetic component to the body's ability to use folate, so it is possible that some mothers are more prone to folic acid deficiency than others," Dr Surén adds.

The study was recently published in the *Journal of the American Medical Association* (JAMA).

More information: [jama.jamanetwork.com/article.a...](#)

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